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LINCOLN SCHOOL OF TEACHERS COLLEGE
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THE SYMPHONY ORCHESTRA PLAYING "LINCOLN SCHOOL SYMPHONY NO. 3"

A Children's Symphony

AS DEVELOPED IN THE CREATIVE MUSIC CLASSES OF LINCOLN SCHOOL OF TEACHERS COLLEGE

WITH THE THEMES COMPOSED ENTIRELY BY THE CHILDREN, AND PLAYED BY THEM ON INSTRUMENTS OF THEIR OWN MAKING AND OTHER SIMPLE INSTRUMENTS

By
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SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN THE FACULTY OF PHILOSOPHY, COLUMBIA UNIVERSITY

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INTRODUCTION

For the first time in the history of music a group of children in an elementary school under the guidance and with the assistance of an artist teacher, has written and played a symphony composed after the classic symphonic pattern, using many instruments which they made with their own hands and other simple ones appropriate to their composition. The execution of this project is a brilliant example of the kind of experimentation which is breaking down the narrowness of much of conventional practice in the school and introducing in its place new experiences rich in educational values.

Some would regard an enterprise of this kind merely as an innovation, and would reserve the word experimentation to describe situations in which precise measurement and control are used in making comparative studies of methods of teaching or learning. While no careful student of education could question the value of such controlled experimentation, it is nevertheless utterly impossible to conceive of a creative enterprise such as is described in this monograph ever being set up according to the techniques of a laboratory. Laboratory techniques have their place in education, but compared with the vision, the imagination, and the insight which motivate an enterprise of this kind, they may be inconsequential.

The critical reader may be skeptical as to the extent of the participation of the children in writing the piece. That such an experience could develop independent of a creative artist, at once master of materials and techniques, no one for a moment would suggest. The contribution of the creative teacher cannot be overestimated. But in all of her experimental work in the Lincoln School Mrs. Coleman has

been striving to achieve situations in which the individual can have maximum opportunity for self-expression and the cultivation of his potential musical abilities. The production of the children's symphony marked an important point in the progress of this work. I had the pleasure of watching this project from the time the idea of composing and playing a symphony bubbled up almost spontaneously in the classroom. If anything, Mrs. Coleman has been too modest in describing the part which the pupils played. I have never witnessed any school activity that more vividly affected all who participated in it. The pupils gained a surprising knowledge of symphonies and made rapid progress in the mastery of music skills. They gained a sense of power, a feeling of accomplishment. Perhaps best of all was the growth in appreciation of and feeling for the finest music.

It is difficult to overestimate the significance of Mrs. Coleman's experimentation, though doubtless questions will be raised as to the appropriateness of this activity for other teachers or other schools, and as to whether public schools can adopt these procedures. Such questions have little relevance. Mrs. Coleman has demonstrated that children of widely varying musical ability can engage in this most significant creative music activity in the elementary school. Nor was this experiment a mere spectacular stunt. It was a phase of a rich experimental program involving all aspects of elementary school music. From the making of the instruments to the composing and playing of the symphony, the project was articulated with the other activities and studies of the school at many points.

Gifted teachers everywhere will be inspired by this achievement.

Jesse H. Newlon

The Lincoln School
June 1931

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PART I

BACKGROUND OF THE SYMPHONY

I

INTRODUCTION

THE children's symphony which constitutes the major theme of this discussion was an outgrowth of a series of experiments extending over a period of many years. These experiments were prompted by a dissatisfaction with current methods of music instruction, and were attempts to find more natural and vital means of helping the musical growth of children. In order that the report of the symphony may be more clearly understood and that the symphony may be accepted as merely one of many factors that can contribute to the musical enrichment of children's lives, it seems well to review briefly some of the causes of this dissatisfaction, and also some of the experiments which led to the particular work reported in detail in Part II and discussed in Parts III and IV.

A glance into the history of music education may help to clarify the situation of to-day and may throw some light on the causes of music's failure to function as well as it might in the lives of many people of the present time.

In the most remote periods of music's history, the beneficent power of music was recognized by all, and it was employed for the good of mankind both as a natural and as a supernatural agency. Primitive races and simple folk accepted without question the life-values of music as a God-given force necessary for the preservation of health, happiness and often even the life of the people.[1] In the ancient civilizations of Egypt and Western Asia, music was closely

[1] Boas, Franz, *The Central Eskimo.*
Frazier, Sir James G., *The Golden Bough.*
Wallaschek, Richard, *Primitive Music.*
Rowbotham, John F., *History of Music*, Vol. I.

associated with poetry, the drama and the dance, and, as in the case of more primitive peoples, had a distinctly religious significance.[2] The Egyptians and the Assyrians developed a great variety of instruments; some of the Egyptian instruments, especially, were elaborate and complicated.[2] The Chinese of ancient days ascribed music to divine origin and held it in close affinity with their religion, which regarded the seasons and other natural changes as the movement of a grand "world-music" in which everything kept strictly to its appointed course. In order to keep their music in its ordained path, the ancient Chinese held it under state supervision, and therefore developed it only in a prescribed direction.[2] According to their mythology, the Hindus derived their music direct from the gods, and they firmly believed in its supernatural effects upon human beings. In order that the greatest and most varied spiritual effects might be derived from its use, the ancient Hindus made their music very complicated, so complicated that half a lifetime was hardly sufficient to understand thoroughly all the intricacies of its scales and ragas. The music of the ancient Hebrews also played an important part in both religious and secular life, and by its magic charm the troubled spirits of men were calmed and restored.

In spite of the high estate of the music of these ancient nations, we know nothing of their plans for the music education of their youth.

The Greeks, though they have left us little of their actual music, have left records of their plans for music education. They adopted much from the music of their neighbors, the Egyptians and the Phoenicians, but they devised a more studied and scientific means of taking advantage of music's beneficent power, and made it the subject of much of their

[2] Naumann, Emil, *History of Music*, Vol. I.
Engel, Carl, *The Music of the Most Ancient Nations.*
Hawkins, Sir John, *A General History of the Science and Practice of Music*, Vol. I.

speculative philosophy. The Greeks built up a system of education which provided music-making as an essential part of the culture of all their citizens, and, not depending solely upon the voice for the expression of music, they gave instrumental instruction to all the youth in their schools. Children began their education with the study of music, for men who were ignorant of music were not expected to accomplish anything great. Greek educators recognized the values of certain qualities in the different "modes" of music, and throughout their educational system a distinction was made between good and bad music.[3] The Spartan boys were taught the Doric mode exclusively because it was supposed to cultivate dignity, manliness and self-dependence. The Phrygian mode was also considered nobly inspiring, but the Lydian mode was thought to be voluptuous and unwholesome for young people. The Greeks forbade their children to play such music as would make them indolent or sentimental, and taught them the kind that they believed would cultivate gentleness and noble bearing.

The great teachers of Greece hated unnecessary complexity, and, unlike the ancient Hindus and Chinese, they did not allow their music to become very complicated. They were able to see the superior values of direct simplicity. Aristotle, especially, warned the Greek youth against artificiality and complexity in music. He considered music and gymnastics the principal things in education, but he urged the young citizen to abstain from playing difficult instruments that required too much finger work. This point of view was prevalent among Greek educators. The large Egyptian harp, for instance, was to them an instrument not to be tolerated, while the lyre of few strings best met their requirement of essential simplicity in musical instruments.[4] Some of the lyres had only four strings, and many had only seven—

[3] Plato, *The Republic*, Book III.

[4] Plato's *Republic;* Aristotle's *Politics;* Aristotle's *Problems*, Book XIX.

instruments so simple that any child old enough to attend school could manage them without difficulty. Thus the Greeks were able to make instrumental music a part of the regular school curriculum. Within the limits of the means at their command, it would seem that they brought music education to a high level: music training for every child, a careful analysis of different kinds of music, and an adaptation of each kind to the needs of individuals. What a richly promising program, and where might it not have led, had the Greek civilization endured!

In the hands of the Romans, music lost its educational office and became largely an accompaniment for the dances and theatrical performances of a degenerate people.[5] In the newly founded Christian church, music was again employed for the good of the souls of men; and although instruments of all kinds were, for a long time, prohibited in the church, the early Christians sang chants and melodies that were probably largely borrowed from the Hebrews and the Greeks. As the church grew in power, choirs of trained singers were instituted, and new hymns were written. St. Ambrose, in the fourth century, established a system of music for the church, founded upon the scales of ancient Greece. The Ambrosian chant was followed two hundred years later by another development in church music, the Gregorian system, also founded upon Greek scales. The Gregorian chant was universally adopted in the Christian church, and formed the basis of church music for several centuries to follow.

During the Dark Ages, music education in Europe sank to a very low ebb. Within the church, the foundations for later chorale singing were being very gradually developed; but outside the ecclesiastical schools, music as a cultural force for the people seems to have had very little to keep it alive. Even though the church recognized the power of music for spiritual growth, the singing schools that had been estab-

[5] Naumann, Emil, *History of Music*, Vol. I.

I. THE VIOLIN GROUP

II. THE FIFTH GRADE PSALTERY PLAYERS

lished by Pope Gregory and others were for the priests and the church choirs only, and all the chants were sung in Latin.

It is true that the simplest of folk songs lived among the people, but there was no organized plan for preserving them, and either the peasant folk merely handed them down by ear from generation to generation, or the songs were passed on to others by wandering singers. There were several classes of these itinerant singers—the Celtic bards who flourished in the north, the troubadours in the south of Europe, the Germanic bards, the minnesingers and later the meistersingers, and the strolling players—all of whom spread among the people not only the secular songs of the time, but also the knowledge of many kinds of simple instruments. This folk music was a free and direct expression of the people, not bound by any rules of church music—an intuitive expression of a spirit that was in close touch with nature.

The Reformation came, and Martin Luther put the hymns into a language the people could understand, and urged the congregation to sing in church. When the people had learned to sing the sacred hymns of the Christian church service, the spiritual office of music was again recognized by them, and something distinctly different was the recreation afforded by their folk music. For a long time secular music was discouraged, and most of the important developments were in the field of sacred music.

Finally, the strong and naturally vital force of music reached a stage of extraordinary development in Europe, and brought forth such masters as Bach, Haydn and Beethoven. Great music was written. Marvelous instruments were built to gratify the musical tastes of the connoisseurs of the rapidly developing Art. Genius raced ahead, and the people were left behind. A fine art had come into existence upon which the masses looked with amazement and bewilderment. Had it grown more slowly, and without interruption in its upward trend from the time of Pythagoras, the people might have

more nearly kept up with it; but as it did develop, it was too often utterly beyond their comprehension, and within reach of only the gifted few. How were they ever to catch up? Who was to show them how? There was no such thing as school music; only a few were privileged to be taught by those who knew the art. No master of music would have had the patience to labor long with a person who did not have an outstanding musical gift. Teaching at that time meant only the passing on of knowledge, and considerable talent was necessary to grasp that knowledge and make use of it.

Thus the day of specialization in music arrived. The "people" realized that this form of art was not for them to participate in; they could only listen and look, and pay well for the opportunity to sit in astonishment before the marvel of sound and technique that could hold them spellbound. If they had not the means to pay the entrance free, they had to keep to their weaving and spinning, for this music was "not for the likes of them." The footlight star arose, and music became a profession and an accomplishment to feed the wonderment of many and the egotism of a few.

Our glance now approaches the present. Here we see professionalism rife. A few really great artists are at the top, and beneath them literally swarms of would-be artists vying with one another for the public eye and ear, quarreling with jealousies that are fed by the whims of a vacillating public—all struggling for the limelight and the applause that their misguided souls feed upon, and often bitterly hating those who get a little more than they. There are agencies and managers by the hundred arranging for public performances of mediocre "artists" whom nobody beyond their intimate circle of friends wishes to hear. Young people with talent are exploited and prodded on by ambitious parents and teachers in the hope that they, too, may play in public; and with this glamour before them, they sacrifice everything that they should hold dear—only to wrest from this struggling mass of

aspirants the opportunity to exhibit themselves before a great mass of other human beings and say by their actions, "Look at me, what a great talent I have!" Who wants to play or sing for the mere family, or for a small group of friends at home? That is not worth while. For music to be really worth while (so these young people believe), it must be given in a public hall with the professional brand and much hand clapping afterward! With the high-sounding slogan, "Art for Art's sake," their art degenerates into the means of existence, and an art merely for egotism's sake.

And the masses? There is a halo around the head of the artist who brings the greatest box office receipts, and the people buy their vicarious enjoyment of music as the fashion of the time dictates, and learn to "appreciate" as best they can.

Then there appear on the scene the mechanical players, the victrola, and, latest of all, the radio. With these wonderful inventions we may all now hear whatever music we wish (and alas, much that we do not wish to hear) for little money. The air is filled with it at all times, and even when we would be quiet, there seems to be no escape; for if it isn't the neighbor's radio, it's the beggar in the court below, or the would-be artist across the way practicing technical exercises until our nerves are almost shattered. And still the supply increases, until here comes an invention that literally pulls music out of the air with electrical devices! Truly, unless something happens to change the direction of this trend, our grandchildren may suffer an unfortunate reaction in an effort to save themselves from the music they do not want to hear.

What is the trouble? Is it not that we have swung so far into professionalism with most of our music? Having become the accomplishment of the few really great, and of many others who use it for selfish and egotistical purposes, with the mass of people left to take what is given them, and with the people having so little virile self-expression of their own,

music has degenerated from its high estate and has ceased to be the life-enriching, health-preserving affair that it once was. Any art loses vitality when it becomes superimposed upon a people; but it is life-giving when it is a direct expression of the people themselves. For nearly twenty-five centuries Western peoples have failed to avail themselves of the possibilities that lie within the natural phenomena of musical sounds for the spiritual growth and social integration of the masses, as an outcome that the Greeks foresaw, and that Confucius also realized. During all these ages music has, because of its vital, eternal nature, here and there survived in the voice of the people, as our heritage of lovely folk music will attest; but wherever professionalism has arisen, its music has been superimposed upon the people, and the vital quality of music injured. And in this respect, the situation to-day is worse than ever before in the history of music.

To a large extent, then, music as an educational force has never regained the vitality that it had twenty-five hundred years ago. In the last quarter century much has been done in its service, and great progress has been made in some directions; but in this country most of our music training does not yet function in the lives of the people in general, either children or grown-ups. Music instruction is so hampered with artificial and technical entanglements that it is too complicated for most children to discover and imbibe the essence of it. Our public schools have the best of intentions, and in many of them music is offered to the masses; but in most of our schools, in spite of hosts of sincere and skillful teachers, music instruction is still superimposed upon children and accompanied by such obstructions that it cannot properly function in their everyday lives.

From its natural high office of Minister of Life, Health, Joy and Beauty, much of our music has degenerated into the tool of commercialism, professionalism, exhibitionism and exploitation. Affected by all these things, and with so little

heritage of indigenous music (and not fully appreciating that which we have), we in America, with blinded vision, too often have seemed to see only the artificial approach; and music as a study, or as an Art expression for the people, has never reached a virile stage in this country. Jazz (our main contribution) is virile enough on a sensuous level; but it is savage in origin, and its tendency is to limit the growth of its devotees in their use of music as an Art expression.

The conviction that there are greater educational possibilities in music study than the children of America have ever realized has given the writer great concern for many years. And the wish to "do something about it," to help in some way to restore the wholesome, natural and vital elements in the music education of children and to place its beneficent effects within reach of all of them (rather than the chosen few) has furnished the impetus for a series of experiments that have covered a period of nearly twenty years.

Out of the problem of what could be done to bring back the vital elements that once gave music a life-preserving value, and to let music, instead of being superimposed upon our children, flower as a wholesome, integrating factor in their lives, grew the thought, in the early days of the experimentation, that the Greeks could teach us something that we have overlooked. As has been suggested, one of the secrets of the great success of the Greeks in making music study universal and vital was the fact that they kept their music and their instruments simple. Aristotle, also, must have sensed the dangers of specialization and "showing off"—dangers from which we suffer. By holding to their ideal of simplicity, the Greeks were able not only to give training in music to everyone, but to make music a vital thing in the lives of their citizens, a dynamic force in the development of their great culture. The Greek child plucking a simple lyre of four or five strings offers a striking contrast to the modern child whose instrumental instruction usually begins on the piano,

an enormous, complicated instrument, the result of man's highly developed inventive genius, an instrument that requires not only a complicated finger technique, but also the deciphering of a bewildering set of symbols before the child can be initiated into its secrets; or else his instruction begins with the violin, which makes even greater technical demands and requires finer finger adjustment. How *could* music training be vital to the average child!

The Greek ideal of simplicity seemed to offer a possible answer, and in this direction the investigation was turned, to see if it could be made effective with modern children; and also to see if there could be found varying degrees of simplicity to suit the varying levels of children's natural musical capacity.

II

THE AUTHOR'S EARLIER EXPERIMENTS WITH CHILDREN'S INSTRUMENTS

One of the first steps in this program of "instrumental experiences for all children" was to resuscitate the simple old instruments of bygone and primitive peoples, and place them within the reach of children. Up to that time these instruments had been of interest mainly to music historians, and as curiosities for collectors and museums, but not for any present-day use. Many specimens of primitive and ancient instruments had been collected in museums, such as the Kensington Museum in London, the National Museum in Washington and the Metropolitan Museum in New York. But their possibilities in the musical expression of children seem to have been entirely overlooked by music educators. Therefore, all the old drums and rattles of many shapes and sounds were brought from their numbered cases for examination; Pan-pipes and flutes, trumpets and whistles collected from Central America, Africa and far-away savage islands began to be respected for what they had to give to children of the present day; marimbas, gambangs, and zanzees that had been mute since their last appearance in the joyous corroboree of their native owners; and stringed instruments—hundreds of them—crude shapes, bows, harps, rebecs, fiddles, psalteries, lutes, one-stringed, two-stringed, five-stringed, forty-stringed, any type one could wish—all were examined for their possible values to children. (If there had remained in these instruments any vestige of the feelings that their animistic owners had attributed to them, how excited and glad they must have been to be considered models by which to make instruments for children to play!)

After many months of intensive study and experimentation with these instruments, certain types were selected that seemed practicable for children. Three things were considered in selecting these instruments: first, they must be easily played by children, so that the satisfaction is not too long deferred; second, they must be of such nature that their use will contribute to the musical growth of children in facilitating their means of musical expression; and third, they must contribute to the children's appreciation of other forms of music.

Out of the hundreds of instruments studied, and after many experiments with and without children, the following tentative list was made, which fills those requirements to a greater or less degree: drums (kettle drums, barrel drums and tabors); bells (ordinary bells, sleigh bells, Swiss bells), glass harmonicas, Chinese gongs, tubaphones, marimbas, Pan-pipes, simple trumpets, shepherd's-pipes, flageolets, ocarinas, simple transverse flutes, recorders, Egyptian harps, Chinese kins, lyres, psalteries, lutes, the Irish harp, simple banjos, monochords, rebecs, dulcimers of various types, and viols and fiddles played at the knees.

Then the question arose, Where are all these instruments to be obtained? A search through catalogues and music stores showed that only a few of these instruments could be bought through the usual channels. The necessity for making models, or having them made, was apparent. By going to the Greeks for a model, an attempt was made to construct a Greek lyre for the pupils to play; it turned out to be a very crude, primitive-looking instrument. The molding of an old picture frame formed the support for the strings (a collection of old guitar strings), and a cigar box within the frame served as a sound-box. But what fun the children had in experimenting with it!

Not far away was a marshy place where bulrushes grew, and a set of tiny green Pan-pipes soon made the myth of

Pan and Syrinx real to the children, and stirred an eagerness to experiment for themselves with blowing all kinds of hollow things. If a bulrush from the marsh and a broken end of Tom's fishing rod held music, who knew where else it might be lurking? Then began an exploration to find all the musical possibilities about the writer's house. The garden hoe responded, and even the hoe handle seemed to have a singing voice of a very deep and muffled kind. Mercilessly the children descended upon everything in sight, not only in the yard, but inside the house and down in the cellar, blowing what could be blown, and tapping everything else, to find every object that had an unsuspected "singing voice." In the cellar, flowerpots and vinegar jugs sang—perhaps for the first time. But the greatest "find" was in the pantry. Here nearly everything that was touched had a singing voice. Water glasses, cups, saucers, plates, cereal bowls, glass finger bowls, deep, yellow mixing bowls, spoons, knives and forks—each one, when we found how to hold it and how to tap it, finally yielded a musical sound.

Soon followed the discovery of a means of changing the pitch of the tone of a glass by changing the amount of water in it. A complete and tuned scale was the obvious outcome, and experiments followed to determine the way to obtain the best tones from the glasses. What a delight the glasses were! There were endless experiments to try, so many ways to play them and so many simple tunes that could be played as easily on the glasses as on the piano.

How strange it seemed that no one had realized the possibilities in these simple things for children's musical experiences! It is true that years ago Benjamin Franklin devised an instrument that took advantage of the musical properties of glasses, and during the eighteenth century the "glass harmonica," made of goblets to be rubbed by wet fingers, was popular as an instrument of entertainment. But for educational purposes, no one seemed to have recognized their value.

After discovering the musical possibilities in so many common objects around them, it was but natural that the children should wish to devise ways of arranging these things into forms suitable for playing tunes—to devise instruments of their own. And why, indeed, could they not make other instruments such as primitive peoples in different parts of the world had made? The children realized that if they were to have these things to play, there was no way to get them except to make them. So we gathered materials together and experimented, and found to our great delight that the children themselves could make many kinds of instruments that really "worked" and were capable of producing pleasing musical effects.

Thus the instrument-making and the simple-instrument-playing projects began. This was in the years from 1915 to 1918, in Washington, D. C. The story of the experiments in the private studio in New York during the next few years is told in *Creative Music for Children* (Putnam's, 1922). Work of this kind was fascinating to both teacher and children, but the studio, with its small and highly selected group, did not provide the means of giving great numbers of children the opportunity to make music on instruments suited to their mental, physical and musical levels; neither did it give opportunities for large groups of children to play together.

In September, 1919, came the opportunity to experiment in the Lincoln School, to determine (1) whether children in large groups (an entire grade) would be interested in making simple instruments; (2) whether such work could be made practicable without taking too much time from the rest of the program and whether the children could, in the school situation, make instruments worth using; and (3) whether the children would be interested in using these and other simple instruments toward the growth of their musical understanding and power of musical expression.

The first year's experiment was in the sixth grade, with two half-hour periods each week. The suggestion of making instruments to play was received with enthusiasm, and during the year we experimented with the making of very simple instruments of several types—drums, Pan-pipes and three-note marimbas. We even ventured into the field of stringed instruments and made a few cigar-box fiddles. Of course, the children played on all the instruments they made, and composed simple tunes for them. The three-note marimba orchestra was a special delight to the children, for they had never realized what could be done with three tones, and many had never played a tune on anything before. Here was a modern application of the Greek idea that proved the vitality and fundamental worth of simple things.

In the spring the grade teacher, during the quiet period of the day, asked the children to write letters as an English lesson. The following letter was especially gratifying, because it came from a boy who had taken no interest in music before this year, who never sang, and was called by the music teacher "the class oyster."

May 26, 1920

Dear Mrs. Coleman:

I never really liked music before you came and taught our class. I always thought it wasn't worth while studying because I couldn't do anything with it. When you started with the stories about the African natives, I began to take notice. When we made our drums I wanted to take up the next step which was marimbas. I enjoyed these more than the drums. The trumpets we made meant a lot for me because now I can play the bugle. The fiddles we made out of cigar boxes I was greatly interested in.

I am going to teach my little cousin the songs I've learned with you. (These little songs were good. I don't think I could play a big song on a fiddle, but I can play these.) She will accompany me on the piano, and we can have an orches-

tra. I would like to put the songs on a record so I could play them on the Victrola and I would play my fiddle at the same time. It has meant a lot to me, and I am going to make a few more songs to play. I like music now. Are you going to teach the seventh grade next year? I wish you would because I would like to make some more instruments.

Yours truly,

_____ _____

Not only this boy, but the entire class showed an eager interest in the work. The music period came just before the noon recreation hour. One day a protest was sent to the principal from the recreation teacher, requesting that the music period be changed to another time because it interfered with recreation. Many of the sixth grade children did not go to "Rec" because they preferred to extend the music period and work with their instruments during that free time.

This preliminary experiment indicated that a definite period of time set aside for the making and the use of simple instruments might be worth while. Accordingly, the next year the experiment was carried on in two grades. The following year it included the children of three grades—fourth, fifth and sixth—with a division of the work so that the fourth grade children made percussion instruments, the fifth grade wind instruments, and the sixth grade stringed instruments. In each grade the children made instruments that could be tuned to the same pitch, and all the children in one grade played together in unison. They also played simple, commercially made instruments, such as flageolets, ocarinas, zithers and the Irish harp.

Various phases of instrument playing (and some phases of instrument making) were tried with the younger children also, in the first, second and third grades. One year the seventh grade children made stringed instruments to be played with bows—violins, violas, cellos and basses; they

formed a stringed orchestra and gave a concert of simple music played in parts. Experiments of various types were tried in different grades during the several years that followed.

Out of these experiments it was almost inevitable that class orchestras should be formed, and that the experiments in ensemble playing should become more and more refined, and from the simplest beginnings become more and more ambitious. There was no opportunity (until later) for the different classes to practice together; each class had its own orchestra, usually of one type of instrument, but sometimes with other individual pieces added for variety and for more interesting effects.

The music used in this ensemble work was mainly folk melodies of different countries, simple themes selected from the classics, and the children's own themes. So far as possible, each child played his own compositions, and no child's composition was expected to be learned by the entire group unless they expressed a wish to learn it and play it together. This policy was followed in order to leave as much time as possible for the learning of melodies that were worth remembering.

III

CONCLUSIONS DRAWN FROM THESE EXPERIMENTS

The following tentative conclusions in favor of the making and the use of simple instruments as educational procedures have been drawn:

1. Experiences in the making and the use of simple instruments contribute greatly to children's interest in music, place them in a more intimate relation to that art, and make their music experiences more vital.

2. These experiences contribute greatly to their understanding and appreciation of music in general.

3. The making and the use of simple instruments afford an opportunity for musical experiences to many children who would otherwise be denied them. Scientific tests show that children are variously endowed with musical capacity and sensitivity, just as they are variously endowed with intellectual acuity. Those who cannot cope with the most difficult instruments have, in these experiences, an opportunity to make music at their own level of capacity. These experiences also provide means of musical expression for those who have difficulty in singing on pitch, or whose natural vocal equipment affords them little or no pleasure in singing. For these people a simple instrument is the best means for direct musical experience.

4. A series of simple instruments of different types enables a child (whether talented or not) to find the type of instrument that is his most congenial medium of musical expression.

5. The making of instruments furnishes an avenue for the constructive abilities of some children who would otherwise develop behavior difficulties.

6. The making and the manipulation of simple instruments tend to arouse interest in the physics of sound and in other scientific matters.

7. Instrument making stimulates creativeness in musical expression. The child realizes that anyone who can make an instrument might make a tune for it.

8. The use of simple instruments for creative expression has a great advantage over the use of other instruments in establishing habits of creative work. The simplicity of the instrument, unhampered by technical barriers, invites the making of simple tunes. Technicians are not often composers.

9. By the use of many types of instruments, musical growth is secured without having to begin specialized training too early. With a simple technique, spontaneity and greater freedom of playing are possible.[1]

10. The use of simple instruments is an aid to children's singing, especially if they sing while they play. Carefully tuned water glasses are especially helpful.

[1] The main difficulty in starting a child too early on a difficult instrument is the danger of a discouragement that, in later life, will tend to hamper him seriously. If he is not physically ready for a keyboard, or a fingerboard and bow, he meets difficulties which seem to him very complicated, and there is danger of setting up in his mind an attitude of inability to master the instrument. This discouragement is likely to remain long after there is any reason for it. It seems a pity to give a child a distorted idea of his powers by making inappropriate demands of those immature powers. Then, too, if he is unable to do work that will bring him musical satisfaction, he will become bored after the novelty of the situation has worn off. The association of boredom will be a great hindrance to his later interest in music. If too great urging or disciplinary measures are employed in the attempt to force an accomplishment in which he is not interested, or for which he is not ready, he may come to hate the very idea of music lessons, and close his mind to all later musical experiences. In many cases these disastrous effects may be avoided by simply waiting until the child is mature enough to meet the technical demands of the instrument, so that he can experience satisfaction in his efforts and feel his power growing.

However, some children are not willing to wait until they are mature enough to cope successfully with these difficult instruments. The mother asks: "Shall I not take advantage of Arthur's enthusiasm to begin lessons? Is it not bad psychology

11. The making and the use of simple instruments and other critical investigations in the field of music tend to make the children more observant of tone quality and increasingly critical of poor qualities of sound. They more readily appreciate the differences between the crude and the refined from having had experiences with both; and the gradual refinement of their own instruments seems to enhance the children's sense of beauty.

12. The use of simple instruments in schools makes possible ensemble work for all children. Many children can play melodies on marimbas and flageolets in an orchestra who could never play a violin or a flute. (Values of ensemble work are discussed on page 33.)

13. The use of simple instruments may often arouse an interest and reveal a capacity that would otherwise remain dormant—not that we need any more professional musicians; but every individual is happier when his native powers are discovered and used.

The following conclusions were likewise drawn regarding the limitations of this work:

1. The making and the use of simple instruments cannot possibly take the place of other important experiences in the musical education of children—song experiences and carefully taught voice work, for instance. The instrumental program is of secondary importance to the song program and should not be allowed to fill that place unless the capacity for singing is hopeless. For many individuals, these instrumental experiences will be a grateful substitute for their at-

to put him off too long? Will he not lose that interest?" This is where the simple instrument will render one of its most useful services in giving the child an opportunity for musical expression and musical growth without making him encounter the deadly discouragement of the difficult instrument and boredom over staff note reading. The same is true of those with little talent who will probably never be ready for the more technical instruments.

III. A GROUP OF FLAGEOLET PLAYERS

IV. THE RECORDER PLAYERS

tempts to sing; but in any school system where voice work is functioning to the joy and musical development of the children, it would probably be a mistake to shorten this singing time in order to introduce instrumental work of any kind. Rather, additional time should be found for it.

2. Children whose talent and development, both musical and physical, are such that they are ready to cope satisfactorily with the more nearly perfected type of instrument, should by all means do so. No definite age can be set for this activity, since children are variously endowed and develop differently. But a child who is ready to work seriously with a "real" instrument would be unwise to spend time on very simple instruments beyond the point where he could get something of value from them, either in recreation or in ensemble playing, or in other social experiences which he would not otherwise have. In any case, his class experience should be supplemented by individual work on his special instrument.

3. Children of the primary grades (Grades 1, 2 and 3) can and do play instruments individually, with pleasure and musical profit. However, as a class activity, the third grade seems young enough to begin ensemble playing—with very simple instruments only, such as glasses of water and marimbas. The class musical experiences of children below the third grade might well be concentrated on singing, listening, and bodily rhythmic expression of musical feeling, with creative work through these media. Class ensemble playing should not be attempted until children are old enough to coördinate their playing and keep together. This requires a biological and social maturity that is seldom present in large groups below the third grade.

4. Although children of primary grade age under adult guidance (in the studio, for instance) may, as individuals, make instruments that give them musical pleasure, it seems impracticable in the case of large groups of children working

together for a limited time in the school program, to make instruments of musical value in the primary grades, and it is probably unwise to initiate activities of that kind in those grades. The fourth grade seems early enough really to begin making instruments.

5. Instrument making has its greatest value at the time when the child can make an instrument that gives him musical satisfaction and that is good enough to contribute to his musical growth in using it. If he is sure to fail in trying to make one that will give him satisfaction to use, he should not attempt it. If his musical advancement is such that he has already passed the stage where the making or the use of the instrument would give him satisfaction or musical growth, he should not waste his time with it. The fourth, fifth and sixth grades seem to be the best place for instrument making for children whose musical experiences have been wide and enriching. For those of more limited experiences, the junior high school seems to be an appropriate time to begin making instruments.

6. In a crowded curriculum where, at best, music has only limited time assigned to it, it does not seem wise to spend too much time on the actual making either of many instruments or of difficult ones. There must be time left to use them, and the other music experiences of the school must not be neglected. Therefore, in the elementary school, where workshop techniques are not highly developed, it seems wiser to have children undertake only those instruments that can be made without a too-long-drawn-out process—instruments that can be finished in a reasonable length of time. Too much of the time set aside for music must not be taken for instrument construction lest the real musical development be retarded. For these reasons it seems that the making of stringed instruments (except those of the most elementary type) should not be attempted in large groups in the elementary school. If stringed instruments are made as

a class project, it would seem wiser to let that activity take place in the junior high school, after much technical skill has been developed, so that better instruments can be made. In the elementary school, if each child makes a rattle, a drum, a marimba and a set of Pan-pipes, these would seem to provide enough instrument-making, unless there is, in some individual case, a special urge to make others.

7. The use of simple instruments in class groups, whether of the children's own make, or other instruments, seems to be a highly desirable activity, provided this activity is so guided that musical growth of the children will result. If the use of musical instruments is merely a "lot of noise"—no matter how much the children enjoy it—it may possibly be a wholesome playground activity, but it is not an educative musical activity, and should not be so labeled.

IV

CHILDREN'S ORCHESTRAL MUSIC OF THE PAST

WITHOUT knowing, in the beginning, where the experiments reported in Chapter II would lead, and without stopping to forecast the details of any special development or outcome, it seemed, after a few years, that practically all the experiments were being drawn, as if by some natural, irresistible force, into the orchestra. The children's thoughts always ran ahead to the orchestra, which seemed to them the greatest realization of musical raptures. They sensed the possibilities and made the demands, and the effort to gratify them was the natural result.

But before going further into the story of our orchestral experiments, let us glance into the history of music for children's orchestras and discuss briefly the general situation of school orchestras and the rhythm band and the limitations of these activities.

When one tries to recall the beginnings of children's orchestral music, one usually thinks first of Haydn's Toy Symphony, the first composition of its kind of which we have any record. It is frequently played by school orchestras of modern days. Haydn's "Kindersinfonie," composed in 1788, has three movements, and is scored for two violins, a double bass and seven toy instruments: a "cuckoo" playing two notes, a trumpet of one note, rattle, drum, whistle, triangle and "quail." As a matter of fact, it was not written for children to play, but for the amusement of Haydn's orchestra and the friends of his patron, Prince Esterhazy. One of his biographers writes: "Haydn, desirous of diverting the prince's company, went and bought at a fair (at Berchtesgaden) near Eisenstadt, a whole basket full of whistles, little

fiddles, cuckoos, wooden trumpets, and other such instruments as delight children. He was at the pains of studying their compass and character, and composed a most amusing symphony with these instruments, only some of which even executed solos. The cuckoo is the general bass of the piece."[1] When the symphony was finished, Haydn summoned his orchestra to an important rehearsal. When the players found that they were expected to play a new symphony upon these toys, the most experienced musicians in the band "failed to keep their time for laughing." The original parts are entitled "Sinfonia Berchtolsgadensis,"[2] and it seems reasonable that the name of the town where the toys were bought should give way to *Kinder* in designating this symphony which made use of children's toys. The writer has found no mention of this symphony's having been played by children in Haydn's time.

The next symphony of this type, so far as we know, was composed by Bernard Romberg, who was born in Germany in 1767. It is scored for the same instruments that Haydn used, with the addition of the pianoforte and a bell. This is perhaps the best known of the *Kindersinfonies* that followed Haydn's. In 1880 it was chosen for performance by an extraordinary company that included most of the great artists of London; but here again, it was the amusing and burlesque element that brought it recognition.

Etienne Nicolas Mehul (1763–1817) composed an "Ouverture burlesque pour piano, violon, 3 mirlitons, trompette, tambour, triangle oblique avec crecelle et sifflet ad libitum," but the writer has not been able to find what use was made of it.

J. Otto (1762–1830) wrote a cantata called "Christmas Time," which employed jingling toy instruments.

[1] From *The Lives of Haydn and Mozart*, trans. from the French of L. A. C. Bombet by Henri Beyle, London 1818, p. 144.

[2] See Pohl's *Haydn*, Vol. II, p. 226.

Felix Mendelssohn wrote two *Kindersinfonies* for the same orchestra as Haydn's, one for Christmas of 1827 and the other a year later, but neither has been preserved. His sister Fanny wrote to Klingemann on December 25, 1827, ". . . Our Christmas Eve, however, was very merry and pleasant. Felix had written for Rebecca a children's symphony with the instruments of the Haydn one, which we performed. It is most amusing. For me he has written a piece of a different kind." [3] In furnishing a bit of fun for the holidays, it had evidently served its purpose.

Franz Xaver Chwatal, born in Bohemia, 1808, wrote "Jolly Sleigh-riding Party" for piano (four hands) and twelve toy instruments, Opus 193. This is also very well known to-day, and like the Haydn and Romberg *Kindersinfonies*, it is kept in stock by modern music publishers.

The following composers of the nineteenth century have also written music which called for toy instruments, but none of these works are well known:

Grenzebach, E., b. 1812, wrote "Melly-Landler für Pianoforte und 8 Kinder Instrumente."

Gurlitt, Cornelius, b. 1820, wrote a toy symphony.

Conradi, August, b. 1821, wrote a Christmas overture, using toys.

Reinecke, Carl, b. 1824, wrote a toy symphony.

Taylor, Franklin, b. 1843, wrote a symphony for piano and toys.

Seidel, Anton, b. 1850, wrote "Christmas Bells," employing toys.

Ryan, Desmond, b. 1851, wrote a symphony for piano, strings and toy instruments. It was published in London in 1885, and was said to have been performed by children at promenade concerts at Covent Garden.

If we except the descriptive effects of the sleigh bells used in some of these symphonies, it would appear that the bur-

[3] From *The Mendelssohn Family* by Hensel, trans. by Carl Klingemann, 1882, Vol. 1, p. 194.

lesque and amusing effects were the aims sought by the composers. It is doubtful that these symphonies were written with any educative value in mind, and it is unlikely that many, if any, of these compositions were ever played by children in schools.

School Orchestras. The first school orchestras in this country were formed in the high schools, and were, of course, inspired by the work of professional orchestras, bands, and adult chamber music groups. These orchestras used music that had been written for professional groups, or adaptations of such music.

During the last quarter century school orchestras have become very popular, and there have been published various types of music for these orchestras; adaptations of folk melodies and other standard music have appeared that range all the way from the simplest of tunes for elementary groups to arrangements of classic numbers for high school orchestras. A very good example of the simple type is Tyffe and Kimberly's arrangement of folk songs for three violins, cello and piano. Some of the more difficult scores call for all the standard instruments of the orchestra. All this music is, of course, meant for those who have studied the regular orchestral instruments.

A good school orchestra is a most valuable means of enriching the musical experiences and the social life of its members, and in many schools it is one of the most vital parts of the school program. But as a school activity it has one serious limitation with which the present discussion is concerned: Any orchestra that employs regular orchestral instruments must necessarily be confined to a special group of selected children, chosen on the basis of talent or opportunity or both. This selective basis, of course, gives the members of the orchestra a feeling of pride, but the children who are not included in the orchestra often feel that they are "left out" of a very important school activity, and some-

times their disappointment has an unwholesome effect on them. Because of this separation, some so-called "unmusical" children come to think that music is not for them, and retire further away than ever from the possible benefits that musical experiences might hold for them. Moreover, those who do play in the orchestra have been known to develop a feeling of superiority, which does not tend toward the healthy social development of the group.

But so long as professional instruments are used, this isolation of the selected group is unavoidable. The technicalities of the instruments demand both talent and study—of varying degrees—and the leading parts usually require a skill that can be developed only through careful individual instruction and much practice on the instrument. There are also many children who, although they have had opportunity for much study and practice, have been debarred because their natural talent has not seemed sufficient to enable them to meet the orchestral requirements of the instrument. Many children have attempted the violin, for example, and have given it up in despair because the technique necessary for making agreeable sounds is too intricate, with so much depending on a naturally keen ear; and few things are more painful, or more out of place in an orchestra, than unsuccessful attempts to play the violin. The violin is, perhaps, the most difficult of all musical instruments to play, yet the conventional orchestra requires more violins than any other instrument. The "masses," therefore, cannot hope to take part in the conventional orchestra without destroying its musical value.

Children's Rhythm Bands. The use of the rhythm band has become widespread during the past decade. It is used mainly in the kindergarten and primary grades, and its object is primarily to give children an opportunity to "keep time" to music and to feel themselves a part of the music without requiring them to contribute to the melody or harmony.

In recent years much has been published for children's rhythm bands calling for rhythmic expression with various forms of shaking, tapping or rubbing instruments. For the most part, the music is supplied by the teacher at the piano, while the children keep time with their instruments of rhythm, with varying tempo and dynamic shading. Notable among these arrangements are the Diller-Page *Band Books for Children*, and Fischer's *Rhythm Band Music Folio.* Some entirely new music has been written for these bands, but perhaps the most valuable contributions of the "toy band" music are the arrangements of standard music.

Since the rhythm band may be organized to give opportunity for all the children in the group to play, this activity is not handicapped by the limitation of requiring a highly selected group. However, it has other limitations:

1. Great skill on the part of the teacher is required to keep the rhythm band from becoming more noise than music, over-emphasizing the rhythmic beat and drowning both the melody and the harmony of the music. A poorly managed rhythm band may cause serious injury both to the child's nerves and to his musical sense.

2. The rhythm band is necessarily only a passing phase in the musical experiences of the children. It cannot go on from year to year and hold the interest of the children, neither can it provide for sufficient musical growth to justify keeping it up indefinitely.

3. It does not usually lead to other musical experiences (except perhaps, for the player of the "traps"), and it does not supply the bridge to other instrument playing. As soon as the "rhythm band" stage has passed—usually in the primary grades—the orchestral experiences of at least nine-tenths of the children stop; at this stage they have not yet reached a social maturity that makes it possible for them to derive the greatest benefit from ensemble playing.

It may therefore be seen that the usual instrumental en-

sembles for children, valuable as they may be in their own spheres, leave unfilled an important gap in the musical life of the school as a whole. At the lower level they do not give opportunity for making the music itself; and at the upper level the personnel of the orchestra must necessarily be highly selected. Neither level provides opportunities for all the children to make real music.

V

THE NEED FOR OTHER TYPES OF ENSEMBLE PLAYING

Those who have played in an orchestra seem to agree in the belief that the experiences have been of great value to them. "This form of musical expression [playing in an orchestra] requires a fine adjustment to others, and at the same time the most careful individual effort. It makes the child stand on his own feet and preserves his independence, while it fosters the idea of unity in common achievement. His independence cannot be bought at a sacrifice of the total harmony, but at the same time the total harmony depends upon the preservation of the individual. He must achieve by concentrated individual effort, and contribute the product of that achievement in a way that will best serve the common weal. He realizes, in a poignant way, his obligation to the group when he hears the discordant effect which results from playing carelessly or inaccurately; when he plays correctly, he feels the joyous and wholesome thrill of taking part in the making of something beautiful. He obeys laws, but his individuality is expressed and his egotism is not unduly fostered.

"In ensemble work the child's mental concentration must be great, so that he will not be disturbed by what others are playing. Only one who has played or sung with others and sustained a part different from theirs, can realize how much concentration this calls for. Even when all are playing in unison, every mind must be concentrated on the work. If one child lags behind, nobody will wait for him, and unless he has the ability to 'catch in' at the right place, he is lost and must drop out."[1] It is most interesting to observe children

[1] *Creative Music for Children*, p. 179.

grow, after a little experience, in ability to "catch in" at the right place, after being lost for a few notes or measures.

Confidence in one's power to work with others is a result of ensemble playing, and the joy one takes in it broadens, at least to some extent, one's attitude toward group work in general; for in ensemble playing the satisfaction is simultaneous with the effort, and tends to stimulate the love for group activities. Here the self-centered child finds, in the experience of a pleasure shared with others, the best of what association with others will give him. Here the self-conscious child, also, has a chance to forget himself. If he plays a part that cannot be singled out, he is encouraged to listen and to enjoy the harmonized unit to which he is contributing.

Whether or not these habits and attitudes go over into any other activity to any appreciable degree, these experiences are of the enriching kind that contribute to the power to feel and appreciate beauty, a power that we sometimes label "culture." And perhaps the greatest of all the values of ensemble playing lies in the pure æsthetic enjoyment of the music that the child helps to make—in the art experience that enriches his life, and points the way to other æsthetic experiences that constitute one of the main "ends" of civilized living. And the teacher who causes a boy to say, "Gee, that's great! Let's play it again!" is cultivating his taste for one of the "good" things.

If the making of music, either alone or in groups, is a cultural, enriching thing, is it not right that every child in school—not merely those whose talent is above the average—shall be given the opportunity to share in those experiences according to the measure of his ability? Of course, some children are more sensitive to musical sounds than others, but there are few children indeed who are so insensitive to music that they do not wish to express themselves musically, or who would not find great æsthetic enjoyment in playing in a well-organized and well-directed orchestra. It seems un-

fair that so many children are being unnecessarily denied the opportunity of making music with their fellows.

If all the members of any class are to play together after the brief stage of the rhythm band has passed, there must be a type of orchestra that comes between the technical level of the rhythm band and that of the usual school orchestra. Unlike the rhythm band, this orchestra must give opportunity to play melodies and really to make the music, instead of merely beating time to it; and, unlike the orchestra of professional instruments, it must not make too many technical demands. In this orchestra there must be a place for every child in the class at his own musical level.

Simple melody-making instruments, such as were mentioned in Chapter II, which present no technical difficulties and at the same time produce tones of accurate pitch and good quality, seem to supply this need and give all children opportunities for orchestral experiences that are above the level of the rhythm band; these instruments seem to fill the gap between the rhythm band and the specialized school orchestra. The instruments may be home-made, school-made, or store-bought, so long as they meet the requirements of accurate pitch, good tone quality and ease of playing: zithers, lyres, psalteries, Pan-pipes, shepherd's pipes, marimbas, water glasses, bells—whatever can be bought or made. Instruments of this type, supplemented by a few professional instruments that certain children in the group happened to play, have enabled us to give orchestral experiences to all the grades in the Lincoln School without any child's being left out.

This, too, is only a passing stage, for many of the children will be able to go from these experiences into the study of some special orchestral instrument. These melodic instruments serve to introduce the children to the more difficult ones. But many children of limited talents will never play the more difficult ones; and without these simple instru-

ments they would be unlikely to have instrumental experiences that are meaningful to them. By a wise use of a variety of instruments, all talents in any one grade may be provided for.

VI

THE CHILDREN'S FIRST EXPERIENCES IN SYMPHONY PLAYING

During the early spring of 1924, in the search to find music that was suited to the children's simple instruments, and finding none that would give opportunity to combine the various instruments and still be within the children's technical reach, the writer thought that perhaps Haydn's "Kinder Symphony" might be adapted to that purpose. Some of the themes were simple, and if they happened to be in the keys of our instruments, parts of them at least might be played on the marimbas, flageolets, ocarinas, and similar instruments, and thus the children, besides playing the "toy" parts, could undertake the responsibility of some of the melody. So arrangements of many of the themes for these instruments were made, omitting the passages that were not suited to them, and letting the piano take these parts alone. The children were delighted with the symphony, and succeeded in making the melodies stand out very well indeed. This was played by the fourth grade (who had made six-note marimbas that year), without any other children to help them out. When they played the symphony for the elementary school assembly, the other children were quite envious of the fourth grade.

The next year, the sixth grade asked to give a symphony. Not wishing to repeat the Haydn symphony with these older children, the writer sought another which might be suited to the instruments the sixth grade children were playing. But the search was in vain; so the writer undertook to compose a short symphony especially for them, keeping ever in mind the limitations of their instruments. It was called

"A Children's Symphony in G Major," had three movements, and was scored for marimbas, trumpets, violins, ocarinas, flageolets, Swiss bells, orchestral bells, drums, triangles, clarion, rattle and piano. Presumably, it was the first symphony ever written in which simple instruments take the melodies.

The sixth grade children had made marimbas, and some of them had also learned to play the flageolet and the ocarina fairly well. The fourth grade this year had made drums, so this grade was called upon to furnish the drum parts of the symphony. The piano furnished the harmonic background, but all the melodies were played by the children on their simple instruments. A part was given to every child in the fourth grade and the sixth grade—about forty children in all. The symphony was learned and given in the assembly hall in May, 1925.

So far, three stages of symphony playing by children have been indicated:

I. In the first stage, represented by the Haydn symphony as written, the children play only the rhythmic instruments, without any melody.

II. In the Haydn symphony, as we gave it, parts were selected and adapted for melody playing by the children.

III. In this stage the entire melodic line was carried by the children, a new composition having been written by the author within the range of their instruments.

The next year the children of the upper elementary grades asked for a symphony orchestra, but because of college work and writing which required practically all the author's out-of-school hours, there was no time, during the two years that followed, to prepare another symphony, and the children's instrumental interests followed other channels. Though the instruments were made and played as usual, the children played mainly in class ensemble.

V. A GROUP OF OCARINA PLAYERS

VI. MARIMBA MAKING—FINDING THE NODAL POINTS
WITH THE USE OF SAWDUST

VII

THE INITIATION OF SYMPHONIES MADE OF CHILDREN'S THEMES

The youngest children who had taken part in the last children's symphony finished the elementary school in the spring of 1927; so that during the term of 1927–28, all the children who had had the symphony experience had passed on to high school. The elementary school had also grown much in numbers, with duplicate grades at each grade level. In December of this year, a discussion arose in one of the sixth grades concerning symphonies. One of the children had heard Beethoven's "Seventh Symphony" over the radio the night before, and to his great delight had recognized the themes that we had studied. Questions such as, "What is a symphony? How is it different from other pieces which the orchestra plays?" necessitated the discussion of symphonic form. In a moment of enthusiasm the proposal was made to show the children how a symphony is constructed by making one for them, if they would furnish all the melodic material that was needed. Like a flash came the thought that a symphony the children had helped to make would impress its form more deeply upon their minds. Of course the themes were all they could make, so, without any consideration of the difficulties or complications of the situation, the proposal was out, the children had accepted it with enthusiasm and there was nothing to be done but live up to the bargain as well as possible. The children insisted that when it was finished they be allowed to play it, for, of course, symphonies are written to be played.

The two fifth grades, having heard of the plan, wanted to make contributions also, and to take part in giving the

symphony; therefore they were admitted to the project. The themes were made hurriedly and given in just before the Christmas holidays. When school resumed early in January, the first movement was ready to show to the children. They learned it with eagerness and contributed more themes for the second and third movements.

Of course the symphony needed drummers. The two fourth grades had just finished making some fine drums, so it was decided to invite the fourth grades to join in playing the symphony, although they had had no part in its composition. Altogether, there were six complete grades admitted to the orchestra (two fourth, two fifth and two sixth grades)—about 120 children, every child in each grade playing something. A raised and terraced platform had to be built upon the assembly stage to hold all the 120 members of the orchestra. By March the symphony was ready to be played. It was given three times, and the children were very happy in doing it. Several children were selected to tell the audience about the symphony, explain the movements and illustrate the themes.

Thus a fourth stage in children's symphonies had been reached; not only did the children play the entire melodic line of the symphony, but it was made of their own melodies.

Almost before the symphony was over, the children demanded a promise that they might have another symphony the next year. At their insistence another symphony was written and played the following year. This one had four movements, and was called "Lincoln School Symphony No. 2," because it was the second one made from themes composed by the children of the Lincoln School. This was given three times in May, 1929.

School had hardly started in the autumn of 1929 before the children of the three upper elementary grades and their parents began to ask about this year's symphony. Those of the two previous years had been written under great pressure

for time. The mere writing and the scoring of the symphonies simultaneously with an otherwise full program, had been very taxing, especially the task of combining themes that had been composed with no definite relation to each other. It was the most difficult puzzle yet encountered; however, it seemed to be the only practical way, where so many children wanted to compose something for the symphony, such young children, and with such short class periods. It was a task of very many hours to juggle around about 150 short themes and motifs of from two to sixteen measures in length, and out of that number to find bits that would go together and seem as if they "belonged"; and from these contributions to build the melodic line of the entire symphony, always bearing in mind the limitations of the instruments, and the limited techniques of the children who would have to play the symphony.

After the melodic line of the symphony had been built, the task remained of writing the harmonies and the piano part all the way through and the orchestration of the entire symphony, which had to consider a part for every child in two fourth grades, two fifth grades and two sixth grades. All this had to be done away from the children, in such free moments as could be found. Therefore it was with reluctance that another such program was contemplated; but the pressure from the children was so great for "just one more symphony" that the promise was made, with the assurance that this would have to be the last one for a time, at least.

"Lincoln School Symphony No. 3," which is described in detail in Part II, is the third symphony that was made on this same line of procedure and played by the children of the Lincoln School. This one was selected for detailed description because it was the most recent and because more data concerning it had been preserved.

PART II

LINCOLN SCHOOL SYMPHONY NO. 3

I

THE CHILDREN WHO TOOK PART

THERE were 137 children in the symphony orchestra. They comprised all the children of the two fourth, the two fifth and the two sixth grades of Lincoln School—no child was left out. Two of the children entered school after the symphony had been partly learned, but they, too, were given parts to play.

The fourth grades consisted of 25 boys and 23 girls with chronological ages ranging from 8 years 5 months to 9 years 11 months. The median chronological age of the group was 9 years no months. Thirteen out of the 48 children were older than the grade norm, 9 years 3 months. In mental age, the group ranged from 8 years 10 months to 16 years 1 month; the median for the group was 11 years no months. Only one child was below the grade norm in mental age. The intelligence quotients of these children ranged from 91 to 183; the median I.Q. was 118; half of the children were concentrated between the limits of 131 and 110. Only one child had an I.Q. below 100. There is no record of the musical sensitivity of these children. Fourteen of them had had previous instruction on the piano, and two had studied violin.

The fifth grades consisted of 21 boys and 20 girls. Their chronological ages ranged from 8 years 11 months to 11 years 10 months. The median chronological age was 10 years no months. Eleven out of this group of 41 exceeded the grade norm, which is 10 years 3 months. In mental age this group was definitely superior. The range of mental age was 10 years 4 months to 16 years 4 months; every child was above the norm for this grade. The median mental age

was 11 years 8 months. The median I.Q. for the fifth graders was 117; the range of I.Q., 104 to 154; the majority of the class were between 111 and 130. The averages on six Seashore tests of musical sensitivity ranged from 38 to 94. The average for the entire fifth grade group was 67 plus. This compares well with the norm, which is 50. The factor of high mental age is probably responsible for at least a part of this superiority. Seventeen of these children had had piano lessons and two had studied violin.

The sixth grades consisted of 30 boys and 18 girls. They ranged in chronological age from 10 years to 12 years 8 months. The median chronological age of the group was 11 years. Eleven of the 48 were older than the norm for the sixth grade, 11 years 3 months. In mental age the group ranged from 11 years to 16 years 5 months. The median mental age was 13 years 1½ months. Only two children of the forty-eight had mental ages below the norm for this grade, 11 years 3 months. In I.Q. the group had a median of 117, the range being 90 to 159, and half being between 112 and 128. There were three I.Q.'s of less than 100 in the sixth grade group. The averages on six Seashore tests of musical sensitivity ranged from 26 to 91. The average for the group was 64 plus—the norm is 50. Twenty-two of these children had had piano lessons and ten had studied violin.

The sixth grade children had all made marimbas, and all except those new to the school had, in previous years, made drums and played on psalteries, flageolets and ocarinas. The fifth grade children had made drums the year before, and more recently had been playing psalteries and wind instruments. The fourth grade children had finished their drums only a short time before beginning to work on the symphony. All the children (except those new to the school) had played glasses in the third grade, and had had some experience in composing melodies to play on glasses or on other instruments.

II

HOW THE SYMPHONY WAS MADE

THE CHILDREN'S THEMES, AND HOW THEY WERE USED

As soon as the children learned that they might have another symphony this year, they began handing in themes, each one hoping his theme might be chosen for use in the melodic line of the symphony. Some of the themes were made at the piano at school, some at home, and some were sung by children who were not certain of how to write them down. Some were composed on the psaltery, some on the flageolet and others on the marimba, according to the child's own mood or fancy. Although many melodies were sung to the writer or her assistant, most of them were handed in written on paper. As the "number notation"[1] is their most familiar means of recording tunes, the children had written the larger part of them in this notation.

Some of the children's melodies, however, especially those in the sixth grade, were given in staff notation. Sometimes

[1] Number notation is a "shorthand" system of the author's devising by means of which the simple, improvised themes of children may be quickly jotted down. Briefly, the method is this: The intervals of the scale are indicated by numbers 1 through 8. Notes that drop below the main octave are written underneath a short line. If the tune goes above the main octave, the number is written above a line. If a melody consists of even note values (for example, quarter notes) with no break in the rhythm, it is written by means of a simple row of numbers.

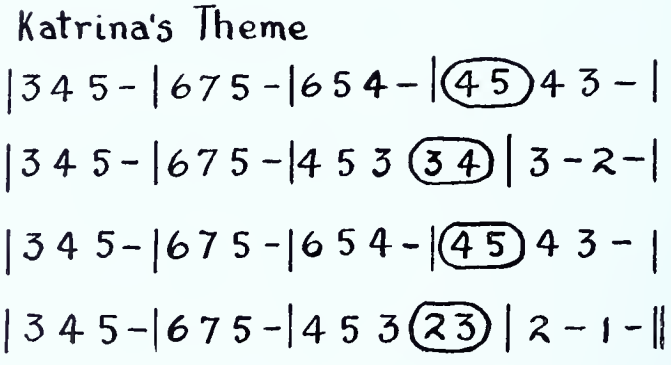
If a half-note occurs in the tune, a short line is drawn after the number that gives the scale tone, the line representing a beat. In the case of a whole note, three short lines follow the number. Two eighth notes are shown by a circle around the two numbers. If a triplet occurs, three notes are enclosed in a circle, and for sixteenth notes, four notes are enclosed in a circle. Bar lines to mark the measures, dots, sharps and flats are employed as in ordinary music, and, if desired, the keynote may be indicated at the beginning. By this means any simple melody may be quickly and accurately recorded, so that there will be no question of how it sounds.

a little scrap of soiled and rumpled paper that had been carried all day among marbles, chalk and other odds and ends in a pocket, contained a charming little bit of melody. There were about seventy-five or more handed in before Christmas, for here again the Christmas holiday was the only time to make any progress in arranging the symphony.

The process began with sitting down at the piano with a basket full of these bits of paper, and playing each one of them, looking for a theme, or a part of a theme that sounded promising. The children had been told beforehand that the first movement would be in four-four meter; and in order to fit the marimbas which the sixth grade children were making, it would better be in the key of F. Nothing else, however, had been determined.

At least two themes, of contrasting mood, were needed, of course, and some inconspicuous interludes or transitions to bind them together. When all of them had been played, Katrina's theme was selected as being complete, tuneful and simple enough to be easily played by the children.

Katrina's Theme



But this theme was too slow and restful to make a good starting theme, so it was put aside as a possible second theme. Something more direct and arresting was needed for the main theme, and there was nothing in the collection that seemed just right. No themes had stood out as being of

compelling interest. Maro's theme started out well, but it did not hold one's interest.

Maro's Theme

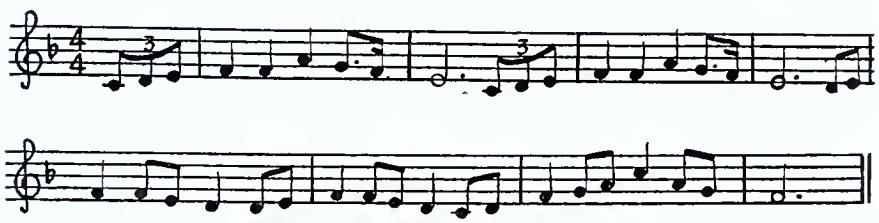
8| 8(765) 6 3| 5 5 - 8| 8(765) 6 3 |

| 5 5 - - | 4 2 7̄ 4 | 2 - 1 - ‖

Evidently some kind of combination would have to be made. So, with a large cardboard and many paper clips, all the contributions that seemed to have any promise whatever were arranged so that all were visible at once. By skipping from one to another, combinations of a measure or two of this with two measures of that could be tried to see how they would go together.

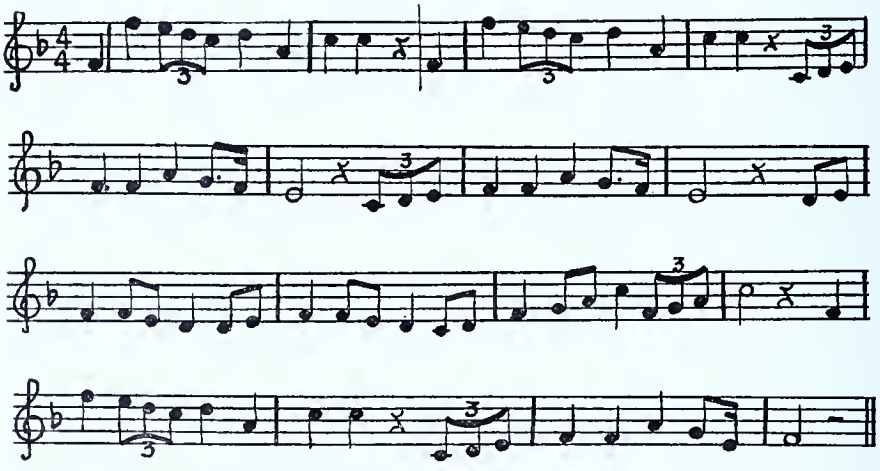
Many such were tried with discouraging results. No two bits sounded as if they "belonged" together. Hours were consumed in experimenting with endless combinations. It seemed that Maro's first two measures might have promise in them, especially if she would change the first 8 to a number 1, giving an octave jump instead of the repeated note. Gordon's melody had triplets in it, as Maro's had, but they came in different parts of the measure.

Gordon's Theme



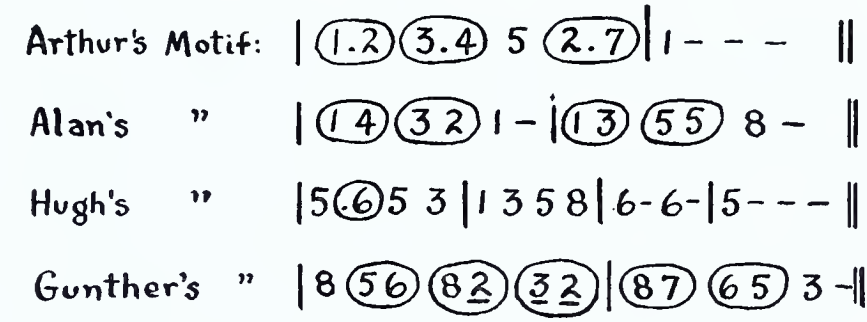
Gordon also had a little minor passage in his theme, which gave it an added interest, but it did not seem just right for the main theme, for its beginning was not dynamic enough. The only recourse seemed to be to take Maro's first two

measures, which were dynamic and had triplets that matched Gordon's triplets, repeat them, and at once pick up Gordon's theme, minor passage and all, return to Maro's two measures again, and end the theme with Gordon's triplet phrase.

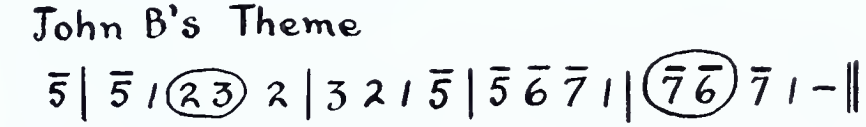


Here at last were three possible themes—Maro's and Gordon's for the main theme, and Katrina's, which was certainly contrasting, for the second theme.

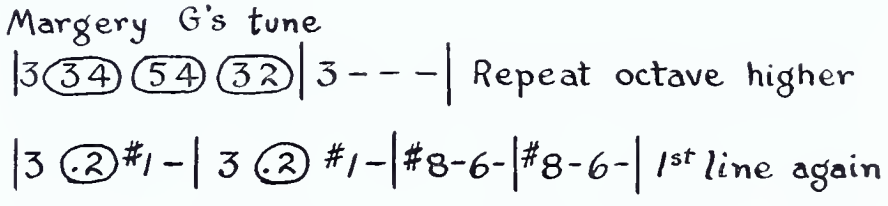
The Main Theme was to be in F, since the marimbas were in F, and they were among our most important melody-carrying instruments. This meant, of course, that the second theme could be in C, in which key the psalteries were tuned, and that the psalteries could take the second theme. But what about the transition passages to lead from the first to the second theme? Here, again, it was a matter of placing the cardboard at the piano, and, with the utmost patience, trying out all the little scraps of paper to see how they would serve as bridge material between the two themes. Finally, a motif from Arthur, one from Alan and four measures from Hugh were selected for the Interlude. Hugh's was repeated as a sequence one note higher; then four measures from Gunther, another sequence of Hugh's which landed in A minor, whence the melody flowed easily into Katrina's theme in C major. (See Score.)

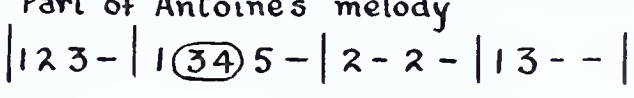


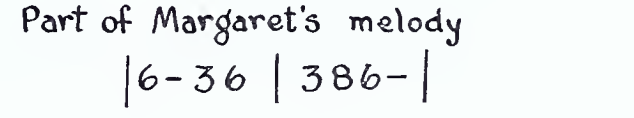
With so many of the children's contributions unused, the statement could not end here, so, in order to use more of the material, another theme was added. John B. had given one that was simple and jolly, and seemed fitting as a closing theme.



So this little four-measure theme was selected; and Margery G., Antoine and Margaret supplied the material for the Interlude, which connected the second and third themes. The Coda was merely an extension of the closing theme.







With the melodic line of the Statement finished, no more of the children's contributions could be used in the First Movement, for the development could be only an elaboration and manipulation of the material in the Statement. (The score shows how this was done.) And the Restatement was also determined, being the same as the Statement, except that all the themes were played in the key of F, the movement ending in the key in which it began.

For the Second Movement the children were told that they might have absolute freedom as to the kind of themes they submitted, the meter, mood, etc., though it was usual for Second Movements to be slow. Mary came into the music room at recreation time and sat down at the piano to make something for the Second Movement, though she had never had piano lessons and could only pick out her tune with one finger. She wanted something slow and a little weird. Accordingly, after waiting a few minutes to feel the mood of what she wanted to express, she put her forefinger on A natural and played without hesitation the fourteen measures which constitute the first theme of the Second Movement. Had it not been for the shorthand system of writing music (see note, page 47), some of the theme would probably have been lost. When it was played over for her immediately afterward, she was pleased and satisfied.

While Mary was still there, Peter came in to try his hand at the piano for a theme. Peter's theme was a little monotonous, and he said it was to represent something of the life of primitive man. He thought it would be a good idea to let this movement represent some of the things that happened to primitive man; "Maybe we could have him encounter a great serpent; or better still, have primitive man discover fire!" He volunteered to make the theme for that episode, but wished to do it at home where he could have more time to think. Mary thought her theme could be used to show primitive man's music, especially if we could have it played

on some kind of plaintive wind instrument. The next morning Peter brought in the theme shown by measures 33 to 37 of the Second Movement score, which, with a bit of Mary's theme added to complete it, made a weird melody; and, when scored for all the instruments (measures 83–91), it seemed to serve very well to represent primitive man's excitement over the discovery of fire.

But there must be something else in the movement. Perhaps the piping of a lonely shepherd and a bit of lively dance music were needed to complete the picture. So Robin made a jolly theme for the marimbas and drums to play, and portions of themes from Joan and Kenneth were put together to make the lonely shepherd's piping.

Bits of other themes that the children handed in were used as interludes between the main themes, and all were put together as they seemed best to give the atmosphere of primitive pastoral life. They were followed by some of the mysteries of nature, and by merrymaking, dancing and excitement over the discovery of fire, with final return to the pastoral life.

Very little experimentation was done in arranging this movement. The children's suggestions were followed, and the melodic line was left almost as it had been joined together the first time. In order to preserve the primitive effect, very little harmonization was done in this movement, almost everything being played in unison.

In a fifth grade class discussion about third movements (after a few third movements had been played on the victrola), it was decided that our Third Movement should be a Minuet. And the next class period was devoted to composing minuet themes, in three-four meter, of course. The fifth grades were playing psalteries; so they improvised on their psalteries, all at the same time, very, very softly, so that they would not disturb one another. When a child made a tune that he liked, he wrote it down, usually in

number notation, and at the end of the period the tunes were all handed in. The sixth grade also composed melodies during the class period. They were using marimbas, and as the marimbas were much louder in tone than the psalteries, it was necessary for the children to tap the marimbas with their fingers instead of with sticks, to keep from disturbing one another. In spite of the gentle tapping of many marimbas, or in the case of other groups, in spite of the soft sound of many psalteries being played at the same time, most of the children seemed to be able to concentrate, each on his own improvisation, and listen to his own melody. Those few who were disturbed by the sound were permitted to take their instruments out of the room and find a quiet place to work.

The first eight-measure theme of the Third Movement (see Score) was a combination of motifs by Elaine, Tom and Gunther. Then followed eight measures by Maro, and a four-measure theme by Carol, all repeated with slight development; these were followed by repetition of the first theme. Edmund, Katrina and Brand each had an eight-measure theme that was used in the trio. These three themes were all that were needed for the trio.

In this movement, again, it was merely a question of juggling the themes together, trying out one after another until those were found which seemed to follow logically and meet the requirements of the composition. In joining melodies together, it was sometimes necessary to consult the children who made the tunes, so that they might change whatever notes it was necessary to change to secure smoothness.

The children were much interested in rondo form as a result of former appreciation lessons; so it was decided to let the last movement be a jolly rondo. The children contributed as many jolly themes as they could think of. The last movement was written under great pressure, since the

VII. MARIMBA MAKING

VIII. THE MARIMBA SECTION

children were ready for it even before the main theme had been selected, and out of all the mass of unrelated material that had been contributed, it seemed at first quite hopeless to build anything that would flow smoothly. However, with much puzzling and more juggling with bits of paper on the board, a Fourth Movement was finally evolved, which many of the children liked best of all the movements.

The first eight measures were Barbara's (see Score); then came bits by Roger H., Hilda and Margery L. to complete the first theme. A portion of one of Florence's themes, with its sequence, furnished the passage into the second theme, which consisted of motifs by Roger S., Joan and Robert A. Then came the Interludes by George N. and June before the return to the first part. The entire third theme belongs to Charlotte (see measures 90 to 97 in score of Fourth Movement), who composed it on her violin. Other interludes between the returns to the first and the second parts were made of motifs from Gifford, Margaret W., George S., Anne C., Frances and Eleanor. Tom G. made a theme that fitted very well as a Coda (see measures 224–233).

One of the disadvantages of this method of making symphonies from children's themes is that in many cases a very good tune has to be discarded because it cannot be made to fit into the general plan for the symphony. Several of the best melodies submitted by the children—for example, two lovely little gavottes by Margery G.—could not be used in this particular work, though they were of greater musical value than many that were used.

In making the melodic line of every movement, the playing capacity and the range of the instruments had to be kept constantly in mind, and the entire melody kept very simple, with no technical complications.

The harmonies were also kept simple, as is fitting in a work of this kind. After the melodic line had been finished, the next step was to write the piano part, which contained

practically all the harmonies. The three violin scores were also written in harmonizing parts, with the abilities of our six violin players kept constantly in mind.

As will be seen in the orchestral score, most of the scoring was kept quite simple, for the only way to make the presentation of the symphony possible was to score the parts for every section of instruments according to the present ability of the children who were to play those instruments, and one of the main thoughts in building the symphony was to provide some parts that were simple enough for the least musical children in every class to play.

III

INSTRUMENTS USED IN THE SYMPHONY

The symphony is scored for piano (four hands), violins (I, II and III), psalteries, flageolets, recorders, ocarinas, marimbas, orchestral bells, drums and triangles. A few simple accessory instruments were added during the process of learning the parts: two single bells tuned to A and E, a few harmonicas in C and F, a toy trumpet in C, a metal bar tuned to D, two rattles for the second movement and two pairs of cymbals for the first and fourth movements.

Piano. Two children played the piano, which, with the violins, supplied the main harmonies. The piano was depended upon to hold the players together, keep the themes running during rehearsals and help the children to become familiar with the melodic line. The piano was the backbone of the orchestra.

Violins. There were six children of the elementary school who wished to play violins in the symphony and who were capable of sustaining these parts. For Charlotte, the Concertmeister, who was quite well advanced in violin technique, a part was arranged which was a little more difficult, in places, than the other first violin parts. The second and third violin parts remained in the first position throughout the symphony. In writing the score for the first violins, wherever the part ventured beyond the first position, optional notes were supplied within that position. The violin group is shown in Illustration I.

Psalteries. The psaltery is a stringed instrument which is plucked either with the fingers or with a plectrum. As in the harp, the strings are of graduated lengths, and depend upon their weight, length and tension for the pitch. They are

kept in tune by means of a tuning key that turns the metal pegs to which the strings are fastened. The instrument looks and sounds much like the old-fashioned zither. It was first manufactured for the use of the Lincoln School children who needed a simple stringed instrument in their music work.[1]

The fifty-three psalteries used in the symphony were played by fourth and fifth grade children. All the forty children in the fifth grade were playing psalteries in their class work, but many of these were chosen to play flageolets, which the entire class had played before Christmas. The psalteries were especially suited to the soft parts of the symphony; they carried some of the themes quite alone, and carried them very effectively. The group of psaltery players is shown in Illustration II.

Flageolets. The flageolet is a fipple-flute with six holes, which are covered and uncovered with the fingers as the flute is blown, to produce different notes of the scale. Our flageolets were all of metal. Three kinds were used, one of English make in the key of B flat, one of French make in the key of C and another of French make in the key of D. Each flageolet player had one each of B flat and C; but there was only one D flageolet used, which was brought in after the symphony was practically learned, and was played in only one or two places. The child who played this played other instruments also. Thirteen children played flageolets. Ten children of this group are shown in Illustration III.

Our flageolets were not entirely satisfactory, since they were not exactly in tune with our piano, and considerable "cross-fingering" was necessary to keep them on the right pitch. Because of the difficulty in playing them in tune, the

[1] In the author's earlier experiments in the school, the sixth grade children made psalteries, but they were rather difficult for children of this age to make, and it was a long process; therefore, in order to have simple stringed instruments that would give satisfactory results and allow more time for playing them, it was decided to have psalteries made by professional instrument makers—the International Musical Corporation of Hoboken, New Jersey.

flageolet parts were made very simple, as will be seen in the score, though accurately tuned flageolets could have added much more to the interest of the composition.

Recorders. The recorder is a jointed instrument, made of wood, with a fipple mouth-piece (such as the flageolet has) but with eight finger holes. During the previous summer it had been the writer's good fortune to find a company in London that made recorders after the designs of the Old English recorders of several centuries ago. So our equipment was enriched with seven of these—three alto, two soprano, one sopranino and one tenor. A group of seven children who practiced once a week during their "creative work" period acquired some facility in playing these instruments. They were used only in the Second Movement, and were very effective in the pastoral passages of that movement. The tenor and soprano recorders were tuned to the key of C, and the altos and the sopranino to the key of F. The group of recorder players may be seen in Illustration IV.

Ocarinas. The ocarina also has a fipple mouth-piece, that is, a sharp edge that divides the air current that is blown into it; it is made, however, in a roundish, bulky shape, somewhat like a sweet potato (by which name it is often called), instead of having the long, pipe shape of the flageolet. The ocarina is sometimes made of porcelain, but usually of clay, painted black. The finger holes are pierced through the clay body to the hollow cavity inside, there being usually a hole for each of the ten fingers. They are made in various sizes according to the desired pitch of the instrument. There are bass ocarinas too large for a child to handle, altos in various keys, and small sopranos. The small ones are quite shrill, but the larger ones, when well played, have a sweet, plaintive tone.

We had soprano ocarinas in F, altos in F and C and two or three altos in D. The children of the sixth grade played the ocarinas, and almost every ocarina player had another

instrument, either a recorder, or, in most cases, a marimba. Illustration V shows a group of sixth grade ocarina players.

Marimbas. The thirty-two marimbas were played by sixth grade children who had made them. Each of the forty-eight children of the two sixth grades had made a marimba, and for a time all played marimba parts until sixteen of the sixth grade children were given other instruments to play—violins, orchestral bells, etc.

The making of the marimbas started in the early fall. Each sixth grade had one hour each week assigned to this work in the elementary workshop, and the instruments were completed, some of them by the middle of December and others in January. Each instrument had a range of fifteen notes, from middle C upward, tuned in the key of F, with the two B naturals made extra, to be used when needed.

In the marimba, each note consists of a bar of wood that has been tuned to its required pitch by regulating the length and thickness of the wood. When all the tone bars are in tune, they are then placed on a board and fastened to narrow strips that support them at their nodal points. Illustration VI shows an experiment to find the nodal points. The strips are thus supported in playing position and at the same time are free to vibrate. Illustration VII shows another stage of the process. In making these instruments the children followed directions given in the author's *Marimba Book*, which they used as a text. The children also made cloth-covered hammers to use in playing the marimba. The marimba section is shown in Illustration VIII.

Orchestral Bells. One set of orchestral bells (of professional make) was played by two children. Four children learned these parts, so that there could be substitutes in case of absences. On days when there were no absences, they changed between movements, so that all four had turns at the orchestral bells. Each played with two hammers. Two orchestral bell players are shown in Illustration IX.

Drums. The seventeen drums used in the symphony were made by the children of the fourth grade. Every child in the fourth grade made a drum as part of his regular creative music program, but it was decided that not more than seventeen were needed in the orchestra. These were selected according to their resonant tone quality. The drum making was preceded by a few weeks of reading from *The Drum Book*, and discussion of kinds of drums the children could make and what material would be suitable. In all cases they brought to school the material for their drum bodies—butter tubs, cheese boxes, kegs, soap-boxes, pails, whatever hollow, resonant body they could find. The skins were bought from a musical instrument store. The drums were all made with great care and decorated with the children's original designs. The two fourth grades, as entire classes, played their drums—forty-eight of them—for some time before the symphony drummers were selected. Illustration X shows the drummers of the symphony.

Triangles. Three triangles were used, in the conventional manner, for special effects in certain parts of the first, third and fourth movements.

Individual Bells. Two individual bells tuned to A and E were used occasionally to bring out ringing effects on these two tones.

Rattles. The two rattles were used mainly in the second movement to add to the suggestion of primitive music. One was an Indian rattle, and the other was made by one of the children.

Cymbals. The two cymbals were used only on the Codas of the first and last movements, and were employed in the usual manner.

Harmonicas. A few children brought harmonicas to school and wished to play them in the symphony. Some were in C and others were in F. These were used only in the first and last movements, and then merely to add to the

harmonic effect. Upon certain beats, the owners of the C harmonicas, for instance, would blow outward for the notes of the C major chord, or draw in the breath for the dominant seventh chord, according to the signals given. In other places, the F harmonicas would give their harmonies, but no melody playing was attempted with these instruments.

The metal bar and the toy trumpet were supplied merely to give parts to two children who were unprepared to play the more difficult parts.

IV

HOW THE SYMPHONY WAS LEARNED

THE Christmas holidays were over, and only the melodic line of the First Movement was finished. But since the children were expecting to begin working on it as soon as they returned to school, the author let them begin to work on the movement on January 6, hoping to keep ahead of their needs. It was barely possible to do this. The last movement was finished only about ten days before the final performance of the symphony!

From the first it was evident that the marimbas would have to be responsible for the main theme, and that the psalteries would have to be the principal carriers of the second theme. The sixth grades had practically finished their marimbas, and the fifth grades had already started the study of psalteries; so, in order to give these two grades something to begin working on as soon as the holidays were over, the first and second themes were put on the blackboard, in both number and staff notation. The themes were discussed (with great interest, of course, as to whose contributions had been used), and the children started learning them with zest. Later the melodic line of the entire Statement was written on the board, its form was explained, and the children were told how their themes had been used. The marimba and psaltery parts were marked.

Each sixth grade as a whole worked on the marimba parts, and each fifth grade as a whole learned the psaltery parts. As soon as a part had been learned fairly well, the piano was used while the children played their instruments; the piano, however, started several measures ahead so that they might hear as soon as possible the cue that called for the

entrance of each particular part. Each theme was memorized as it was practiced, reading from the blackboard. When the main themes were learned, then came the shorter parts in the Interludes, and in a surprisingly short time (the fifth lesson for one group and the fourth for another) the two sixth grades were ready to have the melodic line of the entire Statement played at the piano while they joined with their marimbas at the proper places. The same was true of the psaltery players of the two fifth grades.

In the beginning no one knew who would play the ocarinas. The sixth grades, however, had been promised the opportunity to learn to play ocarinas, so in due time all who wished to learn (nearly all of both sixth grades) bought ocarinas through the school, and part of the class time was used in learning to manipulate these instruments. A large group of sixth grade children assumed the responsibility for the ocarina parts; and as the marimbas and the ocarinas were seldom played together, one child could manage both an ocarina and a marimba very well.

All the fourth grade children had made drums before Christmas. They knew that only a few of them would be needed in the symphony, so they decided that those who did not play drums should play psalteries with the fifth grades, if there were enough psalteries to go round. The psaltery being such a soft instrument, we knew there was no danger of making that section too heavy. The drummers were not selected until some time after the work had begun, so the entire class of both fourth grades worked with psalteries in their class periods in order that we might have this experience to help determine who should play psalteries and who should play drums. We had only sixty psalteries, but as the classes met separately, they could use the same instruments, and we hoped that by the time the flageolet players had been taken from the fifth grade groups and the drummers from the fourth grades, and a few other special instrument players

had given up their psalteries, there would be enough for the remaining children in the four classes. (As it later happened, there were more than enough instruments to go round.)

The fifth grades had been studying flageolets in their class music periods before Christmas. After the entire class had played psalteries for a while, it was not difficult for the children to decide which of the two instruments they preferred to play; and the flageolet group set to work to learn these parts.

As orchestral bells are played in the same manner as the marimbas, it seemed logical to select the orchestral bell players from the sixth grades. The bell part of the Statement was written in staff notation, and as several children wished to play the bells, it was decided that those who had time and inclination to learn the part best would be allowed to play it. Several children stayed after school and during recreation time, repeatedly, and on the basis of proficiency, four were chosen to take turns at the orchestral bells.

Then the members of the drum section had to be chosen. First, all those who wished to play drums were tried out to test their ability in accuracy of rhythm playing; and the assembled class, with the help of the grade teachers, selected the drum group. This group then very proudly set to work to learn the drum part of the Statement, for by this time most of the other children were ready to put all the Statement parts together.

The music room was too small to hold more than two classes sitting in chairs, but if some sat on the floor and others stood, we could squeeze three grades into the room at once. We were so eager to hear how the Statement sounded with all the different parts played, that we arranged to have one sixth grade, one fifth grade, and one fourth grade (thus representing the different types of instruments) come together for one period and try it over. The children were thrilled at

the way it sounded, and were eager to go on with their study of the Development and Restatement. The other fourth, fifth and sixth grades were given the same opportunity to come together and hear the combined instruments, even though the ocarinas and violins had not been added.

In view of the fact that the music periods always involved an entire class at one time, we made the assignment of many of the special parts quite late; and although the six violinists knew that they would be allowed to play violins, they learned the marimba or psaltery parts with the rest of their class—mainly because the violin parts were not ready for them.

As previously stated, the piano part was written for four hands, since there were two good pianists among the children and both wished to play the instrument with which they could contribute most to the general effect. The piano part was practically continuous throughout the first movement and furnished a strong support for the other instruments. While waiting for the piano parts to be written, the two pianists also played the class instruments for some time.

The final distribution of 173 instruments by grades, with many children playing more than one instrument, is shown in the table on the following page.

After the children had become fairly familiar with the Statement, they worked on the Development in the same way in which the Statement had been learned. First, they saw the entire Development on the board in numbers. The part for each instrument was labeled so that, by watching the board, everyone could see what each instrument was supposed to play and what followed. By this procedure the children understood the entire Development as a unit much better than if each child had seen his part only. The beginning was clearly recognized as merely a "playing about" with the first motif of the first theme for seven measures, played by the violins and psalteries, followed by a

bit of Gordon's theme, and more playing round with the first motif. Then followed bits from Arthur and Alan for piano and drums, repeated in minor for the marimbas, and

Instrument	*IV*	*V*	*VI*	*Total*
Piano	1	1		2
Violins		2	4	6
Psalteries	27	26		53
Flageolets		12	1	13
Recorders		4	3	7
Ocarinas			23	23
Marimbas			32	32
Orchestral Bells			4	4
Drums	17			17
Triangles			3	3
Individual Bells			3	3
Rattles	1		1	2
Cymbals			2	2
Harmonicas			8	8
Metal Bar	1			1
Trumpet	1			1

eight measures of the second theme for the flageolets, etc. Each part of the Development was analyzed in this manner for and with the children, and they were much pleased to recognize their own contributions in different forms. The parts for each section of instruments were memorized as early as possible, as had been done in learning the Statement. During the learning process the melodic line was played at the piano, and the children learned by ear when each part was to come in. Just as they had learned the Statement as a whole, each class learned the Development as a whole and listened to the piano carry those parts which they did not play.

The same procedure was followed for the Restatement, which was learned very quickly, since the only changes were changes of key and not of melody.

By February 20 the children were ready to play through the entire First Movement from memory. Not every child knew his part perfectly—in fact, there were some who never did feel perfectly sure of every note—but most of them felt very confident and wished to put the movement all together without the blackboard to see if each could "hold on" to his part when all the other children were playing; and they were all eager to hear it as a complete movement! There was no available place large enough for all six grades to come together except the auditorium, which was filled with seats that had arm rests that were very much in the way in handling marimbas, psalteries, drums and the like. But the children thought they could manage them, so they sat in the armed seats with their instruments, and before the half-hour was over, they had played the First Movement through without stopping. Of course it sounded rough in some places and weak in others; but it not only gratified their interest to hear it as a complete movement, but also made them realize, as they had never before realized, the need for accuracy of playing, and for each one's being so sure of his part that he would not be bewildered by the playing of the others. This rehearsal brought home to each child the fact that he had a part to contribute, and that it must be contributed in the right way and at the proper time.

The First Movement was, of course, the most difficult to learn. As soon as the children felt sure of this one, they attacked the other movements with confidence. The same procedure was followed in learning them, and each of the other three movements was quickly learned. Less time was required to learn all three than the first one had required.

Many of the very simplest parts in the symphony were not presented in the beginning. They were kept in reserve until it was found out who were the children in the various classes who would not be able to keep up with the large section. Some fell behind because of illness, and when they

returned there was no time to learn the long parts. There were several children new to the school who had never had a playing experience, and who easily lost their places and were unable to keep in mind the sequence of parts. Others were so lacking in musical ability that they could not keep up without extra drills which there was no time to give. All these children were assigned simple parts that they were able to carry out with success: individual bells, triangles, metal bar, cymbals, harmonicas, etc.

One child came into the fourth grade from Dutch South Africa after the symphony had been half learned. She did not understand English at all well and found the psaltery too hard to learn at this late date. So Eula was given a rattle, and with this she felt quite at ease, and learned to shake it at exactly the right time.

Tom broke his arm during the period of time when the symphony was being learned, and although his arm was in a bandage even during the final performance, he was able to hold a triangle in the bandaged hand and strike it lustily with the other one.

During the last few days of the work, it was decided that there should be some talks by the children, explaining the symphony to the audience, showing the instruments, and illustrating the themes. The children who wished to make these talks were tried out in the classrooms to see who could speak clearly, briefly and to the point. On the basis of these trials, seven children were chosen. One told of the way the symphony had come about; one told of the instruments and had them illustrated; another spoke briefly of symphonic form in general, and four other children explained the four movements of the symphony—one talk before each movement was played.

The six violinists read from the manuscript scores that had been prepared for them; but all the other children memorized their parts, and learned by ear when each part

was to come in. This seemed to be the only practicable way, for we could never think of wielding 137 music stands, or even half so many. The place that was provided for the orchestra was so small that when all the children came together, there was barely room for them and their instruments; and even so, great self-control was necessary for the children on the higher tiers to keep from digging their toes into the backs of the children on the tier below. There was no space whatever for music stands; so all the children except the violinists carried everything in their minds. This left them free, also, to give better attention to the conductor, and to watch for their cues with both ear and eye. The two little pianists accomplished a veritable feat in a short time by memorizing the entire piano parts of the symphony, so that they, too, could watch the conductor.

The Conductor's Score. The conductor also memorized the entire symphony. This was necessary, for in the effort to hold together so many young children of various temperaments and tendencies, and keep their interest and attention, the conductor could not afford to share her eyes with a paper score. In the beginning the conductor had a "compact score" which, with an occasional glance at the paper, enabled her to follow the orchestration for about a hundred measures without having to turn any pages. The whole First Movement, which in the printed score comprises thirty-one pages, was placed on four small pages held together in one hand. No stand was needed. By holding the score in one hand, the conductor was free to walk about among the group as she wished without losing the place, and the other hand was free to point to the board or indicate the meter and tempo. This compact score was made in the following manner:

A sheet from an ordinary pad of music paper was used, about 7½ by 9 inches, with six staves spaced rather far apart on each sheet. On this page only the melodic line

IX. THE ORCHESTRAL BELLS

X. THE DRUMMERS OF THE SYMPHONY (ONE DRUMMER ABSENT)

was written. The measures were numbered, and there was room for about ninety-nine measures on the first page. Then a box of colored pencils was bought and a "color scheme" was decided upon: blue for psaltery, brown for marimba, green for flageolets, purple for orchestral bells, etc. At the beginning of each psaltery part, *Ps* was written in blue immediately under the staff, and a line of blue dots followed the staff as long as the psalteries were supposed to play. A green slur over the staff called attention to the flageolet part; a purple slur marked the entire length of each part for the orchestral bells. The marimba part was marked by a brown *M* at the beginning and brown dots for the full length of the part. Sometimes several colored lines had to go together, but since the spacing between the staves was generous, there was plenty of room for as many colored slurs as were needed. The brown dots above and the blue dots below gave variety to the continuous slurs, and made all the lines more easily seen. The drum part was written by a line of red notes immediately above the staff, and each tap of the triangle was indicated by a little red triangle.

A quick glance at the colors above and below any measure showed at once what instruments were supposed to be heard at that time. Thus this score, with only three shifts of the pages, could guide the conductor through the entire first movement. Progress would have been greatly hampered if the conductor had been dependent on a regular score on a stand, with pages to turn at every few measures.

Time Required to Learn the Symphony. The first lesson on the symphony was given on January 6. It was played publicly on March 19, and the final performance was given on March 21. In the learning process, the fourth grades had twenty-eight half-hour periods of class work; the fifth grades had thirty-one half-hour periods, and the sixth grades had thirty-five half-hour periods. The actual working time of these periods was seldom more than twenty-five minutes,

and sometimes less, because of the time required in getting from the preceding class, distribution of instruments, etc.

Following is a complete record of rehearsals together. It shows how rapidly the work went near the end. The rapid rate may have been caused partly by the realization that the raised platform that was necessary for the banking of the children together in playing position would have to be taken down on March 22, and that there would be no opportunity to play the symphony after that.

Jan. 31. Took three grades together in music room to let children hear the combinations. Two groups.

Feb. 20. All six grades came together in assembly room (in auditorium seats) to try First Movement.

Feb. 27. Came together again in assembly room to put the Second Movement together.

March 5. The raised platform had just been put in place on the stage. An assembly to arrange seating. No playing.

March 6. Assembly to put Third Movement together for first time, and run through I and II.

March 12. Assembly to put Fourth Movement together to find out how it sounds.

March 13. Assembly to run through all four movements once.

March 14. Assembly to run through all movements. Repeated II.

March 17. Assembly for rehearsal, and to try out the children's talks about the symphony and themes.

March 18. Played for high school. Rehearsed again in afternoon to check up the weak places.

March 19. Public performance.

March 20. Played through symphony once and had photograph taken.

March 21. Last performance.

The frontispiece shows the orchestra in rehearsal.

PART III

REACTIONS TO THE SYMPHONY

I

THE CHILDREN'S POINTS OF VIEW

The week following the last performance of the symphony, the children of each grade that had played in it were asked to write a letter telling the author something of what they thought they had gained from the symphony. They were asked to be perfectly frank and to write as if they were writing to a friend, and say anything they wished to say about it, exactly as they felt. This letter writing was supervised by the grade teacher without any discussion, or any opportunity to ask questions. The children were given the remainder of the music period to write what they wished to say. Some finished in ten minutes; others took twenty minutes or more. No suggestions were made as to how they should treat the subject or what points should be brought out.

According to these letters, every child seemed to get something of value from the symphony, though three sixth grade boys who had been unable to contribute much to the performance, and had been assigned the very simplest parts, stated that they had found the practices quite tiresome and were bored while waiting for their parts to come in; though on the whole they had enjoyed it. The letters have been classified, not according to grades, but on other bases, as follows:

1. *The most musical children* (most musical in the author's opinion) made varied comments such as:

> "I learned symphonic form and from that I understand symphony concerts better. I learned to be prompt in cues."—"The third theme in the last movement was very lovely because the melody was in a minor key. I like minor keys. I would like

another symphony next year."—"I have learned to play all of the tunes on the piano."—"It was lots of fun to make up tunes and play them on the instruments. Please let us have another one next year."—"I think the symphony was so easy to learn, especially the way you taught it. As soon as I can I will get a psaltery, that is if I am allowed, and I hope so. Well, as there are so many more children, I will just say one more thing, I want another symphony."—The two little pianists, who are unusually gifted, wrote: "I did enjoy playing the piano in the symphony. It helped me because I was never in an orchestra before, and I will have to go in one pretty soon. But now I will know what an orchestra feels like. I certainly learned to keep steady."—"I enjoyed the symphony very much and I am glad we had it. I didn't think it was a bit of work. I think it helped my ensemble playing quite a bit. I hope we give it again."

2. Comments of a few of those children who are, in the author's opinion, the most *unmusical*, are also of interest:

"Although it was hard to learn, it was fun. At home I have piano lessons, but I was not very interested in them, but when we were practicing for the symphony, I became more interested in music."—"I liked the symphony because everyone was tending to his own business. That was what helped a lot. I liked my instrument that I played [drum]."—"I liked the symphony very much because it was a very good experience for me, and because I have never studied music and have not been in a symphony. I thought it was very hard at first, but I soon got it quite well. It made me feel quite funny when we all got together for the symphony."—"I think that you taught me how to play the drum so well that I couldn't forget it if I wanted to. I would like to have another symphony next year, and I think the other children will want one too."—"It was wonderful and I shall always remember it. I feel as though I could play my part in my sleep."—"I learned how to come in at the right time. I also learned how to have self-control, and I had to learn how to memorize."—"I have been in the last three symphonies. The last one has meant more to me than the others, because I am older and it is more interesting and a lot of fun to learn and play."—

"I think that when we made the instruments ourselves, it made it much more interesting."

3. Many of the children seemed to feel great *pride* in having taken part:

"This symphony meant a great deal to me because it was the first symphony I had heard, much less played in."—"I got quite a thrill out of the symphony, and I learned how a symphony is made and how to play in one. Before I came here I never thought they had symphonies in school."—"When I am an old lady I shall remember that I was once in a symphony. I have all the notes of the symphony written down in a book."—"I liked the psaltery I played very much. I like to think I have been in a real symphony."—"I learned a lot from it. I could almost write a symphony myself."—"I liked playing the different kinds of instruments in the symphony. I also had fun in going home and telling my mother all the different things we played. Mr. T., a friend of mine, didn't have the least idea what an ocarina was, or a recorder."

4. Several of the children gave evidence of their *emotional reactions* to the music:

"I really loved the music, especially the second movement, it was so spooky. I hope we can have another soon."—"It was fun to be in the symphony. It helped me with my violin and many other ways too. I liked the second movement best because it is mysterious."—"I think that the symphony with all the instruments made it very beautiful. I almost think I liked the last movement best, and I liked the places where primitive man discovers fire."—"I have never felt so happy as when I made my speech."—"At first I thought it a little hard to learn where to come in, but when I heard the first movement put together with all the instruments, I was fully convinced that it was well worth while the trouble of learning it. I really like the second movement best. It reminds me of Africa, a place I have always said I would like to explore. I also love to study about primitive man. The third movement is one I like least. It is too set and stiff and

prim, and much too dignified for me, and rather uninteresting, though the main tune was quite charming. . . . On the whole I am quite proud of being in such a lovely symphony."

5. Some were inclined to be *adversely critical:*

"I liked the symphony very much, but I do think we could have managed our instruments better than we did. If I am in a symphony again, I will know more about it."—"I have a suggestion to make. That is that the children should sit up and not look as though they might fall asleep."—"I enjoyed the symphony very much, and I am looking forward to the one we will have next year. Although I admit I got somewhat tired of it at times, I think it was quite successful. By this I do not attempt to say it was perfect. I could improve greatly on the development and the restatement of the first movement as well as many other parts."—"My mother and father thought it was done very well. But I think that the second and fourth movements could have been better."—"I liked the symphony very much, but I was a little bit bored in the first movement because I didn't know my part very well."—"I enjoyed the symphony about seven-eighths of the time. I disliked the Trio of the third movement."—"I think the symphony lasted too long. I got bored in the last part. Otherwise I liked it a lot."—"I don't think that in the third movement (the minuet) that the children kept together at all well."—"Although it could have been better, I think that on the whole it worked pretty nicely."—"I liked the symphony very much. It helped me to appreciate music more and to be able to work with many children. The only thing that I disliked was rehearsing, but you can not have a symphony without doing it."

6. Others stated more definitely *what they had gained* from the symphony:

"One of the things that I feel will help me is that if I should go to a concert I will be able to understand the music. It gave me a chance to get the feeling of music. I do not know about other people, but I feel that it helps me in memorizing things

that I play on the violin."—"I want you to know that I have never enjoyed anything in the Lincoln School (and I have been here for four years) as much as the symphony. I always loved to hear music, but the symphony made me want to practice my piano, which I used to hate, and now to which I go at every spare minute, sometimes getting in three hours a day, and two at the least."—"I learned how to control myself through the symphony, and also poise. I learned that if I did not pay attention I would not know where to come in. I did not like the practices very much, but I found out later that they were very important."—"I like it so much that at home I am always humming it or singing it and everybody has to tell me to stop it. I learned in the course of practicing the symphony to memorize things quickly."—"The symphony was lots of fun. It helped me to learn how to coöperate and how to memorize things and how to be able to handle more than one instrument, and to know when to come in at the right time. When I go to concerts and hear a symphony, I will know about the themes and movements."—"The symphony meant more to me than 'just a lot of music.' I liked to learn how to play the different instruments, and to learn how to play with other people. It also gave me a chance to compose and to make musical instruments."—"I enjoyed learning the symphony and I know it helped me in my music because I am taking piano lessons."—"The symphony was lovely. It taught me that when you are in a symphony you have to keep your eyes on the conductor. We ought to be thankful that we got to be in a symphony this year."—"Through our symphony which you put together for us I have learned to control myself and have poise. During our various rehearsals I often wondered if every piece of work that was to come through needed as much thought and time as we gave it. At the end I decided it did. In music I found how different melodies can be put together, and also that when you are playing you have to concentrate, and not do just anything to suit yourself."

7. A few of the children were a bit *explanatory* in their comments:

"The reason I liked the second movement was because it was simple, and yet you enjoyed it."—"I liked the fourth movement best because it began at one theme and always came back."—"My opinion of the first movement is presumably very good because my tune was in it. The second movement was the best according to my opinion. And the third movement, although Miss Barnes's favorite, it did not make such a big impression on me. The fourth movement came second and its fast notes quite ran away with me. (This child played third violin.) I got quite a lot of fun from being in the orchestra and with the other instruments. I personally think that it unconsciously helped the other children."—"Though this was only the second time I was in a symphony, I got more out of it this year than last, maybe that was because I was new last year."—"I thought the symphony was a marvelous achievement. It must have been difficult for you to write, score and teach. I enjoyed working on it immensely. I think I know the reason Dr. Schelling wanted the second movement over again. Because it was the only one that really meant something. The first movement had a statement, development and restatement. The third movement had a minuet, trio and minuet repeated. The fourth movement was a rondo with three themes. But the second movement really had the *feeling* for 'Primitive Man.' It had something to say. I personally like the second though I contributed to the fourth."

The sixth grade ten-year-old boy who wrote the following letter asked for permission to type it before he handed it in, as he wished it to look very neat:

"I think that the symphony is a very essential thing for the musical development of us children. It has been really a great opportunity for the development of music and musical appreciation. At the end of our last performance of the 'Annual Spring Concert Season of the Lincoln School,' I felt that I was going to miss a lot of fun and chance of getting the musical education that the symphony provides, that I felt I almost wanted to play it over again. At the beginning of the first

symphony that I partook in, when you told us that we were to be in a real symphony, I felt as if you had asked us to accomplish the impossible. But, emerging from the last symphony which I will take part in unfortunately, I feel like Toscanini, with my present knowledge of symphonies, through all the explanations I had heard. It strikes me that the prettiest of all the movements of the last symphony was the fourth and then the third. It's funny that the second did not appeal to me, but that's probably because I did not have such an awful lot to do in it; and then I always prefer the faster tunes to the slower ones. I don't mean jazz. Am sorry that I did not get some good tunes in, but 'you can't cry over spilt milk.' That newspaper write-up in the *Times* was all right except that you were not given enough credit for the symphony. The pianists were not spoken of at all, which I feel is decidedly unfair, as they were just about the only real musicians of us players. I hope that the other children of the school are fortunate enough to be able to play in at least one of the symphonies, and that I get to hear them. Here's looking forward to more symphonies. I am cordially yours, David."[1]

The day after the letters had all been handed in, a questionnaire was given to the children for the purpose of learning their reactions to certain definite questions. The results classified by grades are as follows:

Of 43 fourth grade children who answered the questionnaire,[2]

43 enjoyed working on the symphony.
43 considered it a happy experience.
42 would like to play in another symphony.
42 named an instrument they would like to learn to play.
43 thought they would enjoy other symphonies more than ever

[1] Several children made the comment that the symphony had helped their ability to memorize other music. This was a conclusion which they drew entirely from their own experience, for this possibility was never suggested to them, since a memorizing "transfer of training" had not occurred to the teacher.

[2] See questionnaire in Appendix, pp. 216.

39 did not find it too hard to keep still during rehearsals and lessons.
43 thought the work helped their self-control.
38 thought the work helped them to keep calm and not get excited.
43 learned to concentrate while other things were going on around them.
42 enjoyed being members of a large organization.

Of 40 fifth grade children who answered the questionnaire,[3]

40 enjoyed working on the symphony.
39 considered it a happy experience.
39 would like to be in another symphony.
38 named an instrument they would like to play.
39 thought they would enjoy symphony concerts more.
35 did not find it hard to conform to the necessary discipline.
36 thought the work helped their self-control.
31 thought the work helped them to be calm and not get excited.
37 learned to concentrate while other things were going on around them.
40 enjoyed being members of a large organization.

Of 45 sixth grade children who answered the questionnaire,[3]

[4]43 enjoyed working on the symphony.
43 realized an artistic pleasure in playing it after it was learned.
41 would like to play in another symphony.
33 would like to play in a professional orchestra.

[3] See questionnaire in Appendix, pp. 216–17.

[4] Two boys who had very small parts to play played individual bells. In each case the boy said it gave him artistic pleasure to play the part after he had learned it; one wanted to play in another symphony, and the other wanted to play in a professional orchestra, and both think they will understand and enjoy symphonies more hereafter; so their negative response to the first question probably referred to fatigue in the rehearsals.

43 thought they would understand and enjoy other symphonies more.

35 thought the work on the symphony helped their power of self-control in refraining from talking and making other disturbances.

32 thought the work on the symphony had given them more poise and calmness.

41 made progress in learning to concentrate.

A few notes were jotted down by the instructor, during the process of learning the symphony, which indicate something of the attitude of the children.

1. Concerning the desire for extra drills:

On January 31 at eleven-thirty, about a dozen children from the sixth grade came down to the music classroom, asking for a music class period. They were told that it was not the day for it. "But we just *have* to have a music lesson now. Please let us!" All voices chimed in, "We don't know the development at all. We *must* work on it. Please let us come. Miss B. doesn't care." As this was very early in the learning process, their eagerness could not have been anxiety about a performance, as might have been the case when the same sixth grade came down in a body on March 20 and wanted a lesson. A lesson was impossible at the time. As they left, Gunther said, "Then don't blame us if it doesn't go right to-morrow!"

At noon on February 5, several fifth grade children had to be sent out of the music room, and told to go to recreation. Miss T. later came to ask why there was a group of children in Mr. F.'s room practicing psalteries instead of being at "Rec." Upon investigation, it proved to be the group sent out of the music room; they had taken their psalteries with them. Again on February 7 a group of children were discovered by Miss T. indoors, in the music classroom at the recreation hour—a practice which they knew was forbidden. They were sent out under protest. Peter had got permission from his recreation teacher and could stay to practice orchestral bells. On March 13, Ann came in before school and said, "May I practice just a few

minutes? There is one place where I think I slur the notes a little too much."

2. An interesting comment was made by a high school boy who was a very gifted violinist and had been Concertmeister the first year.

On February 3 he came to the music room and asked to be allowed to play in the symphony again. It was pointed out that he was in high school now and was too big to play in an elementary school orchestra. He pleaded: "I could sit on the back row and nobody could see how big I am." This, coming from a high school boy who had previously been Concertmeister, certainly indicates that he wished to play for the pleasure of playing and not to feed his ego.

3. Occasionally there were accidental meetings with the parents.

On February 21, Mrs. O., passing through the hall with her daughter, a sixth grade child, said, "A new world has been opened up for this child. She has taken up her piano lessons again, and loves them for the first time."

Mrs. V. came to visit her daughter's class (the fifth grade) on February 5. After class she said, "Oh, it's such fun to go to symphony concerts with this child nowadays. She is so keenly alive to everything that goes on in the orchestra."

Mrs. B. on February 7 reported a conversation with her ten-year-old daughter. "I said to Dora, 'Let me hear you make up a piece.' Dora said, 'All right, I'll make up a symphony'; I replied, 'You mean a sonata.' 'The form is the same. It's going to have four movements.' 'Do you know how to make a symphony?' 'Yes, of course I do.' Then she played four movements. I don't know how correct it was, but it certainly was pretty."

March 7. The piano teacher said Bill D. made up a very pretty minuet for his lesson to-day.

4. There were a few notes made concerning the behavior of the children.

For instance, this note made on March 13: Roger is getting more self-controlled and thoughtful of others than I have ever known him to be.

One child to another member of the class who was talking: "Hey there, cut it out! We've got to work!"

March 20. Interesting to see F. and M. (two behavior problems) coming into the "fold," and working with zest.

5. On February 11, the two pianists (very gifted children, who play difficult classics with ease) came in to play the piano parts while the two sixth grades had a lesson together.

The sixth graders were very noisy. After the class was over, the teacher remarked, "Well, that must have been very trying on you pianists." The reply was, "Oh, it was fun for us; but it must have been very hard for you. The director has the hard part and we have the fun." (This thoughtfulness of others is characteristic of both these children.)

The grade teacher reported a remark of one of these two children, on the same day:

Mrs. E.: "Billie, do you like working on the symphony?"

Billie: "Oh, I love it! Those tunes are running in my head all the time, and they are so lovely!"

The author is well aware of the fact that the loyalty and kindly attitude of the children in general may have unconsciously affected the tone of their comments. It is also most likely that there were adverse criticisms which did not reach the author, who would naturally hear the encouraging more often than the discouraging comments. She is under no misapprehension as to the value of the material given in this chapter; these data are reported here because they are the only available data from the children's point of view.

II

THE "CARRY-OVER" EFFECTS, AS REPORTED BY PARENTS

One hundred and twenty-eight questionnaires[1] were sent to the parents of the children who took part in the symphony. A summary of the 95 (or 74 per cent) of these which were returned, is as follows:

88 parents reported an increased interest in music in general.
4 parents could not tell.
1 parent reported "not particularly."
1 parent reported "no appreciable difference."
[2]1 parent reported "decreased interest."
45 parents reported that the child had been stimulated to a desire to play some instrument.
8 children had asked for violin lessons.
1 child had asked for a better violin.
1 for lessons on some stringed instrument.
7 for lessons on some orchestral instrument.
1 for "music lessons."
3 for lessons on some wind instrument.
1 for lessons on a wood-wind instrument.
9 for lessons on the piano.
1 for lessons on the oboe.
1 for lessons on the flute.
1 for lessons on the clarinet.
4 children wanted to learn to play the psaltery.
1 child wanted to learn to play the ocarina.
2 wanted to learn to play the cornet.
1 to learn to play the recorder.

[1] See questionnaire in Appendix, p. 213.

[2] This was a problem child with emotional difficulties, so known from considerations quite apart from the music situation.

2 to learn to play the flageolet.
1 to learn to play the accordion.

Those who did not return the questionnaire may have failed to do so from oversight or from confusion about the Easter vacation period. Two mothers reported that they had lost the questionnaires. It is quite possible that some may not have returned them because they hesitated to give unfavorable comment.

Parents' Comments as Reported from the Questionnaire [3]

The parents' comments have been classified into five groups: I, parents of musical children who are studying some special instrument; II, parents of musical children who have not had lessons on any instrument; III, parents of children who could not be called musical, but who are studying some instrument; IV, parents of children who could not be called musical and who have never studied any instrument; and V, parents of children whose musical ability seems to be average and difficult to classify in any other category.

Group I. The parents of musical children who are studying some instrument seemed to agree that the experience had been of benefit to the children, increasing their understanding of music and stimulating a greater interest in their study of music. A few verbatim comments from members of this group show the variety of effects (in the opinion of the parents):

"It gave Robert an awakened sense of music and a knowledge of symphony construction that could not have been obtained by mere talk."—"It has greatly increased their interest in music, and both girls are now constantly trying to make up little themes."—"It gave Edward greater interest in his piano studies."—"Few thrills have been greater for Bois. Furthermore, there was a distinct overflow in piano lessons and arithmetic."—"Billy has learned the value of other instruments

[3] See questionnaire in Appendix, pp. 213.

besides his own, and he will now, too, try a violin, only to be able to play in an orchestra later."—"As I am a professional musician, my children are inclined to be bored with music, but Robert showed more interest in the symphony than in almost any other musical activity of his life."—"This experience has made Gordon interested in going to symphony concerts."—"A spirit of coöperation and confidence was developed in John, and a decided interest in music."—"It stimulated in Hugh a desire for a better violin, and now, having it, he appears to have new ambition and incentive."—"Edward has recently shown a desire to *create* music of his own."—"It has greatly increased Roger's interest in symphony concerts, and he now wants to take up the study of a wind instrument."—"I feel that Arthur's whole attitude is affected for the better by participation in the symphony. . . . It has given him a feeling of at-homeness in the realm of music."—"Katrina's keenness in hearing is greatly increased. . . . Discipline from group work under restrained conditions was fine for her. . . . She was already studying piano and I think she has been more faithful about practicing since the symphony."—"The symphonies not only added to June's appreciation and enjoyment of music, but by making her feel that she contributed something, have made music a more intimate part of her life and a means of expression."

Group II. There were a few children in the symphony who were musically gifted but who had never had lessons. The parents of these children made such comments as:

"Thelma has been stimulated, I think, to a lasting interest in music. She wishes as soon as possible to take up some instrument and perfect herself in the playing of it. . . . I never dreamed that she would be so adequately started in musical education."—"A thrilling and valuable experience for Elizabeth. Her interest never abated from the first day to the last performance." (She has since started piano lessons, and shows decided talent.)—"Lewis now listens to concerts easily, analyzes the themes, modulations, and variations."—"I think this experience has been of immeasurable value to Mary in increasing en-

joyment and appreciation of music."—"I am sure Peter was interested not only in his own performance but in what he learned about music; he had a most satisfying sense of accomplishment; he coöperated willingly with other children and submitted to strict discipline without any sense of undue restraint."—"The symphony has stimulated in Antoine a desire to play a wind instrument, and he also now plays his 'own compositions' on the piano."

Group III. Children who have had private music lessons, but who are not "musical," seemed also to gain something from the symphony experience, according to their parents' views:

"She was most enthusiastic over the symphony, and she is constantly at the piano, trying to compose."—"It greatly increased his interest in music; caused him to ask to go to the Schelling concerts which he enjoys immensely. He now wants to take lessons on the piano, though I could not persuade him to go on with the violin lessons last year."—"It seems to have developed her sense of rhythm, which was previously lacking. Keener appreciation of symphonic music."—"It has increased his interest in music, given him an appreciation of the technique of orchestration, and given him an enjoyment of blended music."—"His feeling for music and enjoyment in listening to it have both been decidedly enhanced by his work on the symphony."—"By means of this symphony an understanding of music has begun that is not possible in the usual approach to the study of music." (Cited instances of appreciation.)—"I did not find that it created any desire to do her own piano practicing, but she is now interested in improvising, and the knowledge of harmony and composition of the symphony was a very fine thing for her to gain."—"Her interest in her piano lessons diminished rather than increased. She wants to continue the study of a wind instrument. The symphony gave her a sense of satisfaction in accomplishment more than almost any piece of work she has done in school. I think that from the social as well as the musical point of view she profited by the experience.

Her concentration has developed enormously."—"She was tremendously interested in it and has asked for a psaltery for her next birthday."

Group IV. Perhaps those "unmusical" children who have never had private lessons are the ones whose reaction to the symphony is most gratifying. According to the parents,

"It was his one theme of conversation at home, and greatly increased his interest in music in general."—"It sharpened his interest in fine music and gave him a glow of achievement."—"It has instilled the love of music and the desire to play the piano."—"He now requests to hear regular symphony concerts, discusses the origin of instruments, and has also asked to study music, as evidence of its value to him."—"I feel it has been a very valuable experience for him—creating music of his own, the discipline of working with others, the exactness required, etc. It was a distinctly satisfying experience for him, and I was struck with the knowledge he had acquired of the form of symphony construction, in his discussions with me."—"She has naturally very little sense of pitch and rhythm. Both are being developed through the medium of the symphony. She is, or *was*, completely 'tone-deaf' to pitch. It has increased her interest to a marked degree, and she has started piano lessons. Invariably after a symphony practice, she would spend more time at the piano, trying constantly to compose themes."—"It seemed to me he was particularly pleased to have a chance to participate in a symphony which was not beyond his musical ability."—"He was tremendously interested in the symphony, and now wishes to study music."—"I think it has done a great deal to improve his ear for music."—"He talked constantly of the various steps as it progressed, and looked forward to each new step as the unraveling of a new interest."—"He has not only expressed a desire for music lessons, but is more than ever eager to hear *good* music on the radio."—"It enlivened her interest in the school. It opened a valuable new field of coöperation with her classmates."—"He longs to sing,

but can't, so I feel that this experience gave him a chance to take part in a musical expression that was satisfying. One of his best experiences of the year."—"Through the symphony work you have succeeded in kindling an intense interest in him for music in general and in various instruments that he would not have known otherwise. In view of the fact that in the beginning he was almost 'tone-deaf' and rather indifferent, we feel much indebted to you."—"The two symphony experiences have enormously quickened her musical sense, and she begs to be allowed to have piano lessons."—"He has gained a great deal for his future appreciation of music."

Group V. From a few that do not seem to fall in any one of the above classes:

"I think that no experience that she has had at school has been as valuable as the orchestra. She has gained knowledge and interest and seems to have improved in her home piano lessons."—"She complained a little at the length of time consumed in practice."—"Decreased her interest in music. I do not feel that the means justified the ends" (see note at bottom of p. 86). "It was a very satisfying experience for him and he can tell a great deal about the technical make-up of a symphony." —"She has never had lessons, but now wants a piano and lessons. It has also increased her desire to hear more music."—"The symphony experience has given them a great deal, and the weeks of concentrated work and study on it will be of lasting value to them."—"It has stimulated an interest in instruments. He attempts to show me how a theme may be developed."—"Now that he thoroughly understands what a symphony really is, I am sure he will enjoy Mr. Schelling's Saturday morning concerts."

III

REACTIONS OF THE EARLIER SYMPHONY PLAYERS IN RETROSPECT

THE following are the impressions of some of the older children who had played in one or both of the two former symphonies that were given in 1928 and 1929.

A few days after the high school had heard the elementary children play "Lincoln School Symphony No. 3," a questionnaire [1] was given to the children of the seventh, eighth and ninth grades, in order to obtain the impressions and carry-over effects (if any) on those who had played in the two former symphonies. The remarks of those who had entered the school above the six grade, and therefore had not played in a symphony, were not counted. The remainder were classified according to the length of time that had elapsed since the children had played in a symphony.

Thirty-five of the children had played in only one of the symphonies, and two years had elapsed since they had had that experience. Thirty-four of the children in Grade VII had played in both symphonies, while eight had played in only one, and that the year before.

From seventh grade children, one year after the last symphony experience:

42 children (34 had played in two symphonies, and 8 in one). Of these 42 children, 5 volunteered the information that their former symphony experiences had helped their piano work afterwards.

36 of them had studied music before.

34 reported that the symphony experiences had increased their interest in music in general; 7 did not know.

[1] See questionnaire in Appendix, pp. 215.

33 reported that they can now follow symphonies better than before.

41 thought that this kind of symphony would be valuable experience for other children.

16 thought that these experiences had influenced their later work and achievement in music and other studies.

33 would like to take part in a high school symphony orchestra (others said program was too full) and designated orchestral instruments they would like to play—violin, flute, clarinet and others.

In a requested essay, forty-one of the forty-two children stated definitely that they had gained things of value from their symphony experiences as follows:

"It has helped me in my piano playing"; "I learned a lot in a very pleasant way; you get a lot out of it because you take a new interest in music"; "I learned how to play with other people. To be responsible. As I learned more about the different parts in a symphony, I enjoyed grown-up symphonies more afterwards"; "The symphony helped me in my work habits. I think it made me see a piece of work through"; "It taught me to concentrate on my own work while there are other sounds about me"; "I learned how to play four or five instruments and how to follow a leader"; "I thought it was wonderful the way so many instruments would blend together, and so remarkable that for playing many of the instruments, you needed no musical training beforehand; it teaches you to work together; it gives a broader background for symphonies that you hear later on; you learn how a symphony is built"; "The symphonies gave me knowledge of what a symphony is. If you have never had any lessons in music you get a chance to learn what music is"; "During the symphonies which I have played in, I have learned a great deal about the construction of the symphony." "The symphony gave me a better understanding of music, and made me learn to appreciate a symphony, and the feelings of music. It also brought to me the discipline of self-control. . . . It has given me interest to look up in books

about the old instruments, where they came from, how played, what part of music the instrument takes, and the idea of making your own instruments and playing real tunes on them gives one the satisfaction that I can not express."

After an interval of two years, those who played in the first symphony (1928). Twenty in eighth and fifteen in ninth grade. Total of 35 children.

23 of them had studied music before.

29 reported that the symphony experience had increased their interest in music in general. 5 did not know whether it had or not.

28 reported that they can now follow symphonies better than before.

33 thought this kind of symphony would be a valuable experience for all children.

20 would like to be in a high school orchestra (others said program was too full), and indicated orchestral instruments they would like to play—violin, flute, horn, flageolet.

34 of the 35 stated definitely that the symphony experience had been of value to them.

"It made me want to play something, so I started piano lessons." "I learned what a symphony was, how it was made, the movements and other parts. I also realized that elementary school children really can do things worth while." "It gave me a better liking for music." "It helped me to read notes, to play together and come in at the right time." "I learned symphonic form." "The experience will also help me later on in life when I hear symphonies." "I got a lot out of the symphony when I played in it; the ability to play certain instruments, knowing how a symphony is made, and learning to concentrate on my instrument while the other instruments were playing." "The symphony stirred up my interest in music because I was actually taking part. If a person was never interested in music before, he would certainly become so after playing an instrument in the symphony." A very shy boy wrote: "It enables children to know each other more closely. I enjoyed it very much.

The manner in which such a variety of instruments could be put in harmony is extraordinary."

From ninth graders (also after an interval of two years):

"It taught me the form of the symphony. It was also, of course, a lesson in responsibility and self-control, because anyone could have spoiled the symphony completely." "It taught me to coöperate with a lot of people. It also taught me a great deal in my work habits by teaching me to work with other children." "I got a liking for playing the flageolet, and for music in general." "The work on the symphony helped me when I started part-singing." "It was quite an experience. A wonderful opportunity to learn a lot about symphonies and music in general." "When I played in the symphony I began to realize what it meant to work together."

PART IV

IMPLICATIONS

I

QUESTIONS THAT MAY ARISE

An administrator may ask:

I. "Why bother with all this instrumental work in order to give valuable ensemble experiences to children? Would not singing together have the same values, and be more easily manipulated?"

The answer would be yes, so far as concerns the ensemble experience, if all the children are keenly interested in the singing, and if the song experiences are vital to all the children and if they sing musically and with appreciation of good music. There are no music experiences of greater value to children than those of good chorus singing where the attitudes and appreciations are positive.

But, unfortunately, this is not the case in many schools. There are always some children who, for physiological reasons, cannot lend their voices to good effect in chorus work. They are naturally not interested, and their boredom reacts unhealthily on themselves and on the rest of the group as well. Any group that does fine and artistic work in singing must exclude those who spoil the music with sounds that are off pitch, especially in part-singing, and there are few schools in which no child need be told to "keep quiet and listen" in part singing.

This difficulty of the poor singer and the "unmusical" child is met much more easily in a well organized orchestra in which all the instruments are assigned according to the ability of the children.

There is something in the manipulative tendencies of children that seems to make them greatly interested in play-

ing with their hands. They like to handle things and produce effects with their own manipulations. For this reason there are times when the use of instruments will hold their interest more easily than keeping their hands still and singing. There have been many children in our orchestra who, although they came to us from other schools where the singing instruction was good, maintained that they disliked singing and had never found any joy in it; yet they were most enthusiastic members of the orchestra.

II. Who pays for the material that goes into the school-made instruments, and what becomes of the instruments afterwards?

This problem may be solved to suit the situation. In the Lincoln School the individual children are charged with the cost of the material for the instruments that they make. The instruments then belong to them, and they take them home after they have finished using them at school. In many cases of children who live in small apartments where there is no place at home for a big drum or marimba, these instruments have been left at school, or given away to some other child.

III. How much does a symphony interfere with the regular school program? Does it not take a great deal of time?

This depends upon how big an undertaking is attempted. The longer the symphony, the more time it requires. A short symphony can be given without taking more than the music periods if it is well managed. If only one or two grades are combined, the question of practices together is much simpler, of course, than if many grades are combined. If it is well organized, the parts well arranged, and if it is on a simple plan, the instrumental work should not require more than two hours each week for any group; even if only one hour a week is possible, the work could still be done, although it would naturally spread over a longer period of time.

Because of the various values in this type of experience, it may be considered well worth taking the time to give it under ordinary school conditions.

IV. Will not the use of these simple and crude instruments lower the children's standard of tone quality and make them more indulgent of crude, unmusical sounds?

At first thought it might appear that this would be the case; but in reality it seems to work the other way. Varied experiences with simple instruments exercise the ability to listen for tone quality and call for care in producing the best tone of which the instrument is capable. One learns discrimination only by practicing discrimination, and the use of varied types of instruments gives an opportunity for the exercise and development of that power which is not given by experience with a standard instrument of fixed pitch, like the piano. Critical listening, comparison of tone qualities, efforts and personal discovery to improve tone qualities, the gradual development and use of more refined instruments with greater possibilities, an understanding of how these improvements are brought about—all these things contribute to one's understanding and make one more critical of tone quality, demanding higher standards of musical production. Many surprising criticisms, as well as suggestions for the improvement of an inartistic performance, have been offered by the children who have lived through these experiences. The sense of beauty is not dulled; it is made more keen. A supervisor in Toledo who had been giving the children these experiences since September, wrote last Christmas: "Never did the carols seem so beautiful. Our creative work has made us all more sensitive to beauty."

The time to use simple instruments is in childhood, before the powers for wielding the complicated instruments have developed. Why should the use of an instrument suited to one level of maturity injure an appreciation of that which belongs to another level, any more than the simple language

of primer and first reader injures one's appreciation of Shakespeare?

Growth and an understanding of differences make one appreciative of better things. The child who begins with crude materials and gradually helps to evolve a sweet-sounding instrument will probably be better able to discriminate between pleasant and unpleasant sounds, and will have developed a greater sensitivity and better habits of discrimination than one whose first and only instrumental experience is with the piano keyboard, which he accepts as it is, and the tone of which he takes for granted.

V. Is it not a waste of time for children to learn their own original compositions? Or those of other children?

Here is an opportunity for much discrimination. In this great thing that we call musicianship, many things are involved. One of the largest elements in it is interest in music as an intimate thing, a part of one's own self, an emotional attitude, a real feeling for it. To create music that is good enough to learn is to encourage that intimacy and a confidence in one's power to use music as a medium of expression. This feeling about music, this attitude toward music, is one of the most precious things one can acquire. This the child must gain, whether he becomes familiar with the classics or not; and if he has this first, the classics will come the more easily later. Folk music is the perfect music for childhood *if* it is supplemented by original work, but neither folk music nor original work should be omitted. The teacher must be the judge of how much learning of their own compositions will be needed by the children in order to keep the happy balance of appreciation of the world's best music, an intimacy in the handling of music's forms and keen delight in their own creative power.

VI. Is it worth while for children to take the time to learn to play a symphony made of their own themes, or any other symphony not written by a great composer?

If children are to have direct symphonic experiences, there seems to be no other way; for the "Kinder Symphonies" which have been composed by the great composers are very few, and they give the children only the rhythmic embellishments—no opportunity to play the body of the symphony. Of course, all the standard symphonies are much too difficult for children to play. The piano or violin student takes the time to learn to play simple music that adds to his musical development, and if the teacher does not find in classical music the thing that the pupil needs at that particular time to fill a niche in his musical growth, she does not hesitate to give him something else that supplies the need at that time. If a symphony is musically pleasing, of correct symphony form, with nothing to injure or cheapen the child's taste, and if the child enjoys learning it and playing it, why is it not worth while, regardless of who wrote it? Who is to prove that it is not "good" music—good in that particular situation? Beethoven's "Ninth Symphony" could not function in that situation; therefore it would not be fitting for the children to attempt it. The question of what is good music has been discussed for many years, but it has never yet been settled. There can be no one answer, for it all depends upon the situation. Appropriateness is one of the elements of goodness, in music as in anything else. Any music that increases one's capacity to hear, understand and enjoy music is, on the face of it, good music for that person at that stage of his development. Doubtless the classic composers could have given us beautiful symphonies for children to play with simple instruments if these instruments had been in vogue in the schools of their day; but they did not compose them, and we must make the best of the situation. Playing a simple symphony which children love and enjoy is a wholesome musical experience for them, whoever wrote it; and if they helped to make it by supplying themes, the interest is naturally greater and the sense of ownership is added. The chil-

dren are thereby brought into a closer relation to symphonic music and develop a feeling of intimacy and of pride in partaking of its higher forms.

It is understood that there should be as much of the world's great music literature brought into the children's experiences as is possible. A thorough saturation with folk melodies that have survived the test of time establishes a foundation and cultivates a taste that will help children to judge and criticize their own music and that of others.

II

PRACTICABILITY IN OTHER SCHOOL SITUATIONS

This symphony was the culmination of a series of experiments in an experimental school. Over a period of years the mechanisms and techniques here employed were being gradually developed—not with the symphony as the end in view, however, for all the time we were merely playing with materials wherever the interest of the children seemed to lead, and were content if any musical experience was enriching. We were feeling our way in an unexplored field, and did not know where we were coming out; the symphony was upon us before we realized it. Nevertheless, there were being developed during all these years, not only techniques in the handling of these materials, but also confidence in their worthwhileness and patience on the part of the children, who knew from experience that "something nice" would come from our experiments. We had the sympathetic understanding and coöperation of all the grade teachers and other special teachers, who were ever ready to help move aside any difficulty that impeded the activity; and on every hand we were surrounded by an atmosphere of interest and appreciation which, of itself, helped to sweep the thing along. Although the program assigned only one hour each week to the instrumental work, during the last stretch of two weeks or more the children insisted on using their singing periods also for this work, knowing that later the time could be "paid back" to the voice work. This meant two hours each week (usually in four half-hour periods), which gave them time to learn the parts. Then on the last few days, when it was necessary for all six grades to come together,

extra "assembly periods" were arranged—a change in the program which, of course, involved the coöperation of all the other teachers.

These are factors that contributed to the ease of giving the symphony in our particular school, and that might not be found in every school situation. Another favorable element in our situation is the high intellectual average of the children (see page 45)—which probably enabled them to learn the symphony more quickly than a group with a lower average could have done. (In the more heterogeneous groupings of the average public school, more time would have to be allowed for the slower children.) However, there were other things that made it more difficult for us, which might not be found in other schools:

1. On account of full afternoon programs, there was no possibility of work after school except in one or two individual cases. All the work had to come within the school program before three o'clock, and that program was always very full of things of great interest and vital importance to the children which could not be missed. If the children could have met in groups after school (as is practicable in many schools) the work could have progressed more smoothly and rapidly.

2. There was great difficulty in arranging for a place large enough for rehearsals. In the Lincoln School there is only one assembly hall for both elementary and high school, and with many play rehearsals going on in both schools, and with other assembly activities, it was extremely difficult to find periods when the assembly room was free at a time when we could arrange to get together. The seats in the assembly room have arm rests that make it difficult for the children to play their marimbas and psalteries and drums. The stage was not big enough to hold the children and their instruments, even without chairs. Therefore, the only way to get them placed in orchestral arrangement was to build a six-tier

platform on the stage, and then build out the front of the stage with a platform to cover the first row of audience seats. By the use of this raised and enlarged platform, all the children could be placed so that they could see the conductor (see Frontispiece), and rehearsals would have gone well if we could have had access to this platform whenever we needed it. But, unfortunately, our work rendered the stage impracticable for all the play rehearsals and picture reels that were scheduled in both elementary and high schools, so this raised platform could not remain in place long at a time. It took several workmen a half-day to put it up, and the same length of time to take it down, and the assembly room was not usable during either process—to say nothing of the expense of the labor. The only way the matter was finally managed was through the coöperation of the high school program committee, who agreed to give up all use of the assembly stage for picture reels, play rehearsals, and like activities for a period of two and one-half weeks, in order that the platform would not have to be moved during that time. And all rehearsals together had to be done at such times as could be arranged during that period, on the last three days of which the symphony was given before the public.

A school with an auditorium platform or any other place large enough to hold the orchestra would not meet this difficulty of a specially constructed platform that could not be allowed to remain in place. With easy access to a room large enough for rehearsals, one of our greatest difficulties would have been avoided. Even as it was, our children were not physically comfortable with their chairs so close together and the tiers so narrow that there was not adequate room for their feet. Probably nothing but their interest in and concentration on the symphony kept them from quarreling over space, for our children have never hesitated to make their discomforts known!

If other schools are interested in doing work of this kind,

there is no reason why the same type of work, or better, could not be developed in many other schools. The main warning would be, "Do not begin with a symphony; but start your orchestra with much simpler things." The teacher must first acquire a familiarity with handling instruments of this kind and a technique of getting the best effects from the children. Smaller groups of children and fewer combinations of instruments would be better for the first two or three years of such work, until the teacher feels quite at home in scoring simple music for these instruments, and feels sureness in his direction of the children. The children must also feel confidence in the director's knowledge of the instruments and in his ability to score appropriately for them and to produce artistic effects with these instruments. All this must come with experience.

The teacher who successfully undertakes a symphony of this kind should have not only knowledge of the various orchestral instruments, but also experience and a "knack" in the use of them. He should take genuine pleasure in organizing children for this kind of work, and have the power of patience in guiding them through the details of it. Musicianship, knowledge of harmony, musical form and general appreciation of music are also essential. There is required not so much the creative power of a musical genius as the gift for manipulation and organization, backed by good musical taste and artistic sense.

The children must also have rich musical experiences of various kinds before they are ready to contribute either to the making or to the playing of a symphony. Of course, they could be taught parts in a mechanical way, and they *could* play the symphony without knowing what it was all about, but the symphony would then lose its greatest value to them, and it would be a waste of time, giving the children only an empty shell without the kernel.

In some school buildings, there may be enough children of

practically the same age, of similar grades, to form an orchestra; and in such situations several orchestras of various levels could be organized, with only the older children attempting to play symphonies.

In the next few pages will be given suggestions for work in the elementary grades which may lead to symphonies such as the one that has been described.

III

RECOMMENDED COURSE OF STUDY

To repeat the warning given in the preceding chapter, the supervisor or the music teacher who wishes to develop this type of work in school grades should not undertake a symphony until the children, and more especially the teachers who will guide them, have had at least two or three years of experimentation and practice in the making and the use of these simple types of instruments. During this time, folk melodies and the children's own compositions will supply sufficient material for the interest and musical development of the children until the teacher has acquired a technique in the handling of these instruments and in scoring melodies for them that will enable him to attempt the more complicated forms with confidence.

Instrument Making. Before initiating a school experiment in the making of any instrument, the teacher should make at least one of that type, in order to be prepared for any difficulties that may arise in the children's work. The making of difficult instruments should be avoided until the teacher is sure that the pupils can succeed with them. Success in the making of a very simple instrument is far more stimulating and educative than disappointment in a more complicated process.

The *Glass Harmonica* is one of the simplest instruments to contrive that will give musical results of a definite value. It is made merely by collecting ordinary drinking glasses, sorting them according to their pitch, and tuning them to the notes of the scale by regulating the amount of water in each glass. The glass harmonica may be made of any size, from a range of three notes to that of three octaves or more.

according to the needs of the player. A set of three or five glasses will make a very good beginning, and more may be added as the need arises. If one is patient and persevering in the search (in department stores, ten-cent stores and in the pantry at home) one may easily find glasses for a range of three octaves—tall, thin iced-tea glasses for the lower notes, high-sounding jelly glasses for the very high notes, and ordinary drinking glasses for the middle notes. The children may participate in the tuning of the glasses to the musical scale, but the teacher must, of course, be the final judge of when the glasses are in tune.[1]

Drum Making furnishes a good beginning for the actual making of instruments, and children of almost any age from nine to fourteen who have never had that experience are usually interested in making good drums that they can use with satisfaction. They may find their own materials for the bodies of their drums either at home or at the neighborhood grocer's or the hardware store. The drumheads may be made of skin (bought from a music store), or rubber (from an inner tube) or heavy linen (to be wet before playing). Either the fifth or the sixth grade is a good place to start this project, to study the subject of drums and make them in class. By taking great care in the selection and use of materials, fifth grade children can make very fine and beautiful drums.[2]

Marimba Making may start in the sixth grade or the junior high school. These instruments are more difficult to make than drums, and require careful workmanship and patience to get each stick exactly in tune. If possible, they should be made in a workshop equipped with workbenches, saws, planes, braces and bits, and under the guidance of a

[1] Suggestions for work of this kind, and directions for tuning are given in the teacher's pages of the author's *First Steps in Playing and Composing* (John Day, 1931).

[2] The author's *Drum Book* (John Day, 1931) gives directions for the making and use of drums.

teacher with a keen musical ear who will judge the correctness of the pitch of the sticks. Lack of equipment, however, need not necessarily deter any group that is eager to make marimbas. In one public school the children brought tools from home and made their marimbas in the school basement. After the instruments have been made, the children should have much experience with them in playing folk melodies and composing tunes of their own.[3]

Pan-pipes are not difficult to make, and if proper materials can be found the making of pipes will furnish an interesting—even if noisy—project for the upper elementary grades. Any kind of hollow tube that is capable of being closed at one end will suffice for a pipe. Reeds that grow in marshy places, hollow wooden stems, glass tubes, small metal pipes closed with cork at one end or even clay may be used. A little practice in blowing across the open end will usually result in a musical tone.

Other Instruments. In addition to those that the children make, other simple instruments may also be used with profit in the various grades. There are several types of instruments that are very easy to *play*, and yet too difficult for most children to make with satisfactory results. To this class of ready-made instruments belong the psaltery and such wind instruments as the flageolet and the ocarina. Division of these in the grades to avoid repetition the following year should be arranged by the teacher. Playing on the psaltery could be taken up as an entire class activity in any one of the upper elementary grades in which there is time for it—for instance, in the fifth or sixth grade during the latter half of the year, after the children have had considerable use of the instruments that they have made. Flageolets or ocarinas could also be used in the same way.

Use of These Instruments. In using these instruments it is

[3] Directions for making marimbas may be found in the author's *Marimba Book* (John Day, 1930).

important that habits of careful and accurate playing be established from the beginning—careful discrimination of tone quality, correct technique in the use of the instrument and rhythmic accuracy—all these should be watchfully maintained. The experiences may be guided into the playing of folk tunes and other standard melodies, playing both by ear and by note, and also into varied forms of original compositions. Where it is practicable, combinations of the instruments may be made in the playing of folk melodies. Drums and marimbas, for instance, combined with the piano, may provide interesting ensemble experiences for the children who have made them. Gradually other instruments may be combined as the teacher sees the way to make these combinations practicable and of musical value to the children.

Grade Placement. When starting an experiment in the making and the use of instruments by grades, it would be better, in the writer's opinion, to begin the work with the older children, in the upper elementary or junior high school. If it seemed better to confine the experiment to the elementary school, the fifth and sixth grades would make a good starting place in a school for the first year, giving these two grades something of a foundation in the work and the teacher an opportunity to handle the materials without too many complications.

Not only is there this practical reason, but there is also a psychological reason for placing this work high in the grades. Teachers of experience know that it is much better to move an activity down than to try to move it up. Younger children accept with pride what the older children have been doing, but the reverse is not always true. If glass work is started in the sixth grade, the children would probably take great delight in it, just as adult beginners do; but if the glass harmonica is offered to sixth graders after the third and fourth grade children have used it, their pride might be so affected that they would dislike it very much. It is therefore better

to start any instrument a little higher in the grades than the teacher thinks it will eventually be placed, in order (1) that she may have her first experience with the more helpful, older children, and (2) that the children's attitude may not be affected in case it is decided to place this instrument in that grade later.

In order that the children may derive the most pleasure and profit from the use of all these instruments, it will be necessary for the teacher to see that the children do not have too many new things at once, or go too quickly from one to another. It is better to introduce the instruments gradually, to present a new one only after one has served as well as it can as an instrument for individual and class use. If new things are presented too frequently, the children skim over the possibilities too lightly, and their work tends to become superficial.

The glass harmonica may be adjusted to various levels of musical advancement, and may give valuable musical experiences to children of almost any grade. If used by older children, it may be made to serve in their studies of harmony. By having a large range of glasses, with several children playing at once, very interesting harmonies—duets, trios, four-part songs and melodies with accompaniment, as well as simple unison melodies—may be played by children of the upper grades. If the fifth and sixth grades are busy with drums and marimbas or other interesting instruments, the fourth grade might well undertake an experiment in the making and playing of a glass harmonica.

After the teacher has tried out various uses of the glass harmonica with the older children, the playing and composing on the glasses could be introduced in the third grade if it seemed desirable and practicable. In this grade it would be well to use several sets with small range, perhaps only three notes at first, gradually increasing the range to five, six and eight notes.

Third grade children can tune glasses, with the guidance and criticism of the teacher. They can also play other simple ready-made instruments; but they are, on the whole, hardly mature enough to attempt the actual making of an instrument of musical value. As stated elsewhere, the writer would recommend that the making of instruments should not be attempted as an entire class activity below the fourth grade, and even here, only those of the simplest type, such as the drum, should be attempted.

A Suggested Program. The instrumental work should, of course, be carried on in addition to the regular voice work of the school. In the present study no attempt has been made to suggest either material or procedure for the singing program, for the well prepared supervisor and music teacher are already familiar with that field.

After two or three years of experimentation along the lines suggested above, a program of instrumental experiences somewhat like the following might result:

Third grade: Beginnings of playing and composing, mainly by ear and by number, on glasses of water, and small marimbas (perhaps made by older children in the school).

Fourth grade: Making of drums and use of them in ensemble work, and in much practice of reading rhythm notation; more melody work with glasses of water of larger range than in third grade.

Fifth grade: Making of Pan-pipes and use of them in playing and composing. Playing other wind instruments, such as flageolets and ocarinas. This work can be closely related to the voice work, and the instruments used to help motivate the reading of staff notation.

Sixth grade: Making of marimbas, and use of them for playing by ear and by note, and for original compositions. Playing on psaltery in both melody and harmony. Original compositions in melody and harmony.

Or, the psaltery may be placed in the fifth grade and the

wind instruments in the sixth. For orchestral reasons, the psaltery might fit better in the fifth grade than in the sixth; otherwise the sixth graders would have two bulky instruments to manipulate, and the fifth grade only the small wind instruments. But if the sixth grade should take care of the marimbas and the wind instruments also, in the orchestra, many of these children could manipulate two instruments, and play them interchangeably.

These suggestions of definite grade placement for the various phases of this work may appear at first glance to be in opposition to the modern idea of child-initiated activities. But in reality they are not. Ensemble music must always depend on group decisions, with one leader in control of the situation; and the teacher who would develop a school orchestra must necessarily guide the children in their preparation for it. Without this definitely planned guidance and organized direction, there can be no successful whole-grade orchestra.

IV

POSSIBLE MISAPPLICATIONS OF THE IDEA

This type of work is particularly susceptible to distortion in the hands of teachers who see in it a possibility for something spectacular or impressive, and therefore easily "sold" to the public. In such hands it loses its value as a series of experiences that have as their main object the child's continuous musical growth and personal integration. Whenever the making of an instrument becomes merely an end, and not a means to further growth, the process loses its greatest educational value. Therefore we must not unduly concern ourselves with how perfect the instrument is. We must "have the courage to be crude" so long as that crudeness leads to growth.

Another distortion of this work observed in the past few years is that of giving the children who make instruments too much help. The child who merely "assembles" parts that have been prepared so that he cannot make a mistake, has missed the larger part of the creative thrill; and it is deceiving him to lead him to believe that he has made it all himself. This distortion is probably due to the wish to have children make "good" instruments at a lower age level than they should attempt this work. The result is likely to be an attitude of insincerity about the whole process, and at least a temporary blocking of the child's real growth. If the teacher's main aim is to have children make perfect instruments for them to play on, he has missed the point of this particular philosophy, and would better buy professionally made instruments whose accuracy of tone is more reliable.

It is probably inevitable that any new educational experiment shall be misconstrued and misinterpreted by many who

are not within the experiment itself. It may be evaluated too highly in some directions, and given wrong applications and false emphasis. The public always seeks a simple solution of problems, and when a new thing appears, many are prone to say, "That will solve my problem," forgetting that education is much too complicated a matter for any one solution to be found. This is true especially in music education. Certain "methods" become the fad, too much is expected of a method, the reaction comes, and another rises to take its place in offering "the one simple solution" to the problem of musicianship.

During the last fifteen years, in the course of efforts to impress upon music educators the importance of making available to children, the experiences herein described, many false impressions have been made. Taking for granted that music in general needed no champion; that all music educators realized the importance of a high standard of voice and instrumental work in the schools—and realizing that the field of music education is too varied to cover, in one approach, all its phases, the author's efforts have been somewhat concentrated on this one particular contribution in the field, namely, the making of simple instruments by children, and the use of these and other simple instruments in school classes. The arguments have therefore centered about the inclusion of these in the school program. Perhaps, since one does not argue for an already accepted idea, it is only natural that some should infer that this is the sole kind of music program that the writer advocates. One teacher, hearing only the argument for the opportunity to make instruments in school, came and timidly inquired whether the author would allow a child to play on an instrument which he had *not made!* This incident illustrates the difficulty of seeing any plan of education as a whole, letting each contribution fall into its proper place as a mere section of the entire picture.

The making and the use of simple instruments cannot possibly take the place of other important experiences in the musical education of children. These are only phases which, until recently, have been overlooked as having educational value. In the writer's opinion these experiences fill a gap in the music program of many schools, for they enable many children to experience music who would be denied it under the conventional régime. But, however valuable this type of work may be in its place, its limitations must be realized, and a sensible balance must be preserved in the school music program, which should include not only these things in their places, but also much listening to the world's best music, and much singing of the finest song literature that is appropriate to children.

This contribution of the making and the use of simple instruments is an offering intended to supplement, articulate with, and provide a foundation for a school music program of the finest, most artistic vocal and instrumental music experiences and appreciation of which the children are capable. While serving in this capacity, this study, it is hoped, will help in many cases to quicken an interest in good music, in some cases to uncover dormant capacities, and in all cases to stimulate creative power, to cultivate an intimacy and understanding of the tools of music making, and to provide music experiences that will, through their satisfactions, lead to higher levels of enriched living for individuals.

V

SUMMARY

Dissatisfied with current methods of music teaching which gave no opportunity for the masses to experience music in a vital, intimate way, and stimulated by the Greek ideal of simple instruments and instruction for everybody, the writer started an investigation many years ago to find a way of giving instrumental experiences to all children at each child's own level of musical ability.

Explorations in the history of the evolution of music led naturally into the making of instruments of various types by the children, and the playing of every kind of simple instrument that they could find, devise or make. Original composition on these instruments followed, and habits of improvisation were developed, supplemented by studies of folk melodies and other music literature. The class experiences in the Lincoln School led naturally into ensemble work, combining all the different types of simple instruments, both school made and professionally made, in the class orchestra. Deductions were drawn, both as to the values and as to the limitations of this work.

Several years of orchestral experiences, with entire grades participating, resulted in a study of the symphony and experiments in forming a symphony orchestra of our own. Three symphonies (in three years) made of the children's themes and scored for their simple instruments, were the direct outcomes of these experiments. The third one of these is herein reported in detail.

The complete score of "Lincoln School Symphony No. 3" of four Movements is given in Part V. The melodic line consists entirely of themes and motifs composed by the chil-

dren of grades five and six. It was learned by the children of the fourth, fifth and sixth grades in about two and one half months (with an average of about one and one half hours' work each week), and given three times in March, 1930. The four unique features of this symphony (as of the two former ones) were:

1. It was made entirely of children's themes.
2. All the melodies (not merely the rhythmic parts) were played by the children, mainly on very simple instruments.
3. Many of the instruments were made by the children.
4. Every child in the six grades of the upper elementary school played in the symphony orchestra, not merely selected musical children.

From the children's point of view, the symphony was an enriching, worth-while experience. In most of them it stimulated a greater interest in music and greater understanding of it. From the parents' point of view it was valuable to the children, with wholesome carry-over effects in their home music, and giving satisfying musical experience to the unmusical children. From the point of view of the older children who had played in the two former symphonies, the experience had been a happy and profitable one, with increased interest in music for most of them.

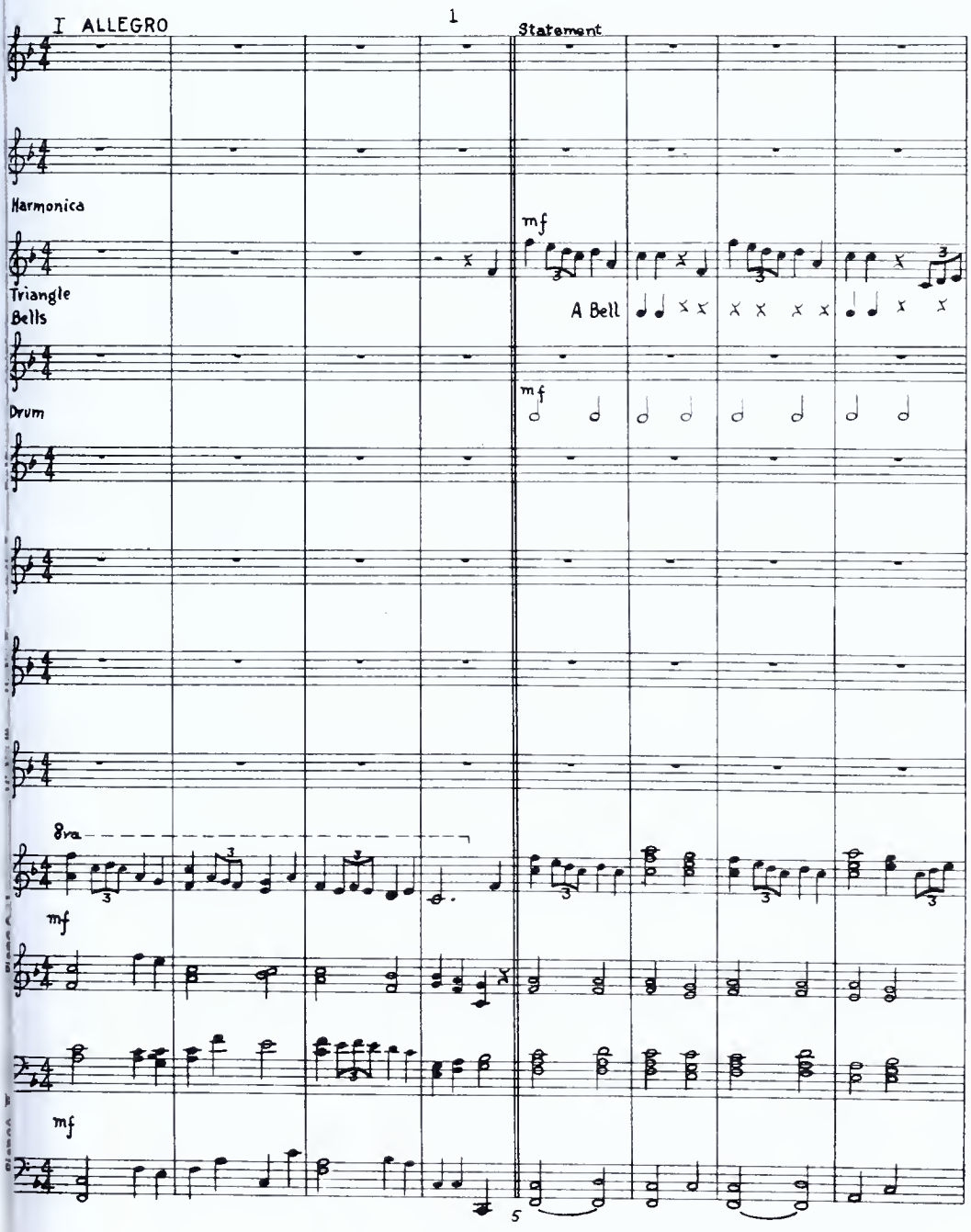
The question of practicability in other situations depends largely upon the willingness of the teacher to begin in a small way, not starting with a symphony, but letting it be the possible flowering of a series of vital musical experiences and fundamental growth. A course of study for this phase of instrumental school music is recommended. It is believed that work of this type, if properly given, would be practicable and very much worth while in public schools, would help greatly to vitalize the music work of the school, and would give opportunities for musical expression to many to whom it would otherwise be denied. It is not meant to replace, but

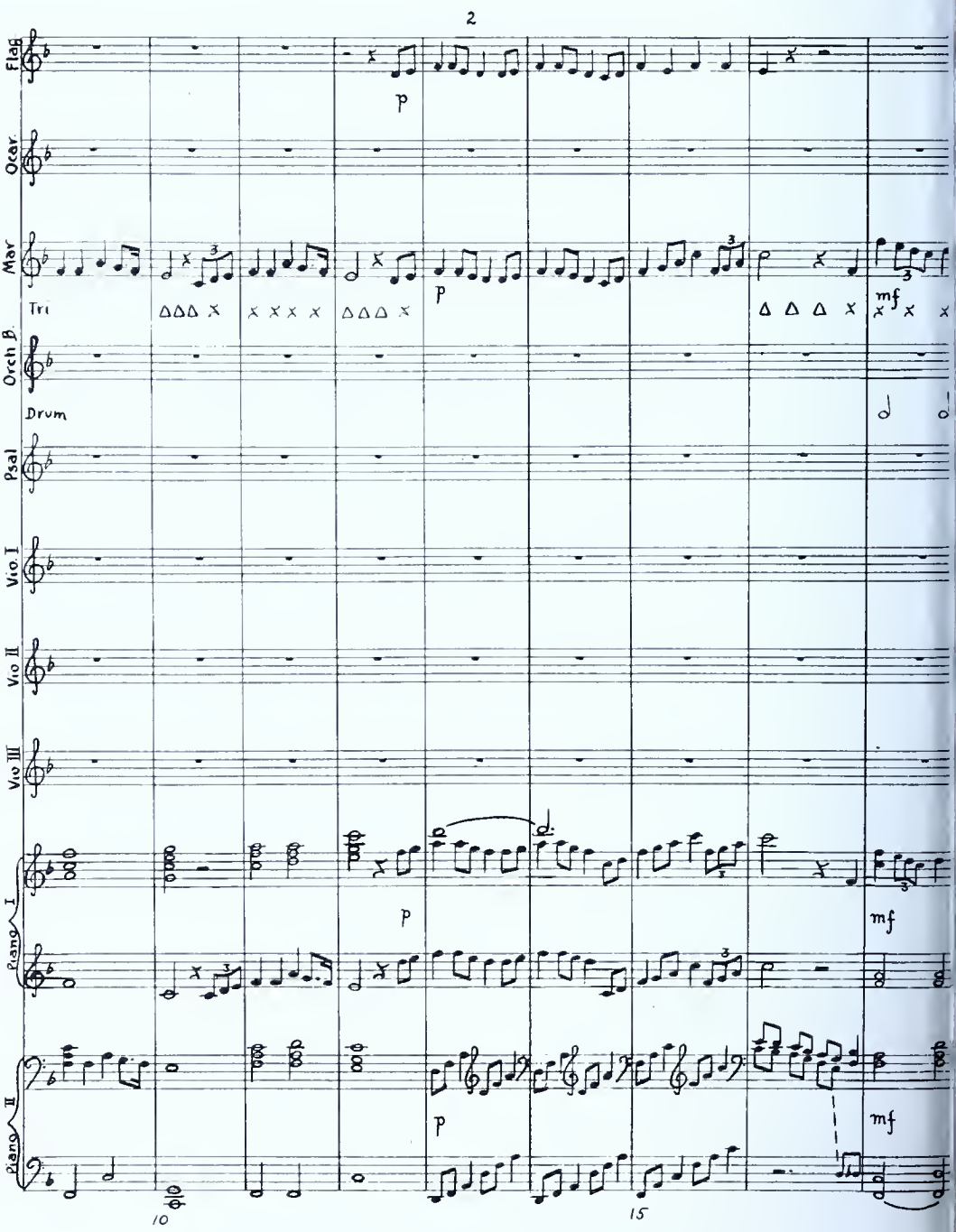
to supplement and lay a foundation for other types of enriching musical experiences. Care should be taken that work of this kind be employed in a way to bring about the greatest *growth* of the child.

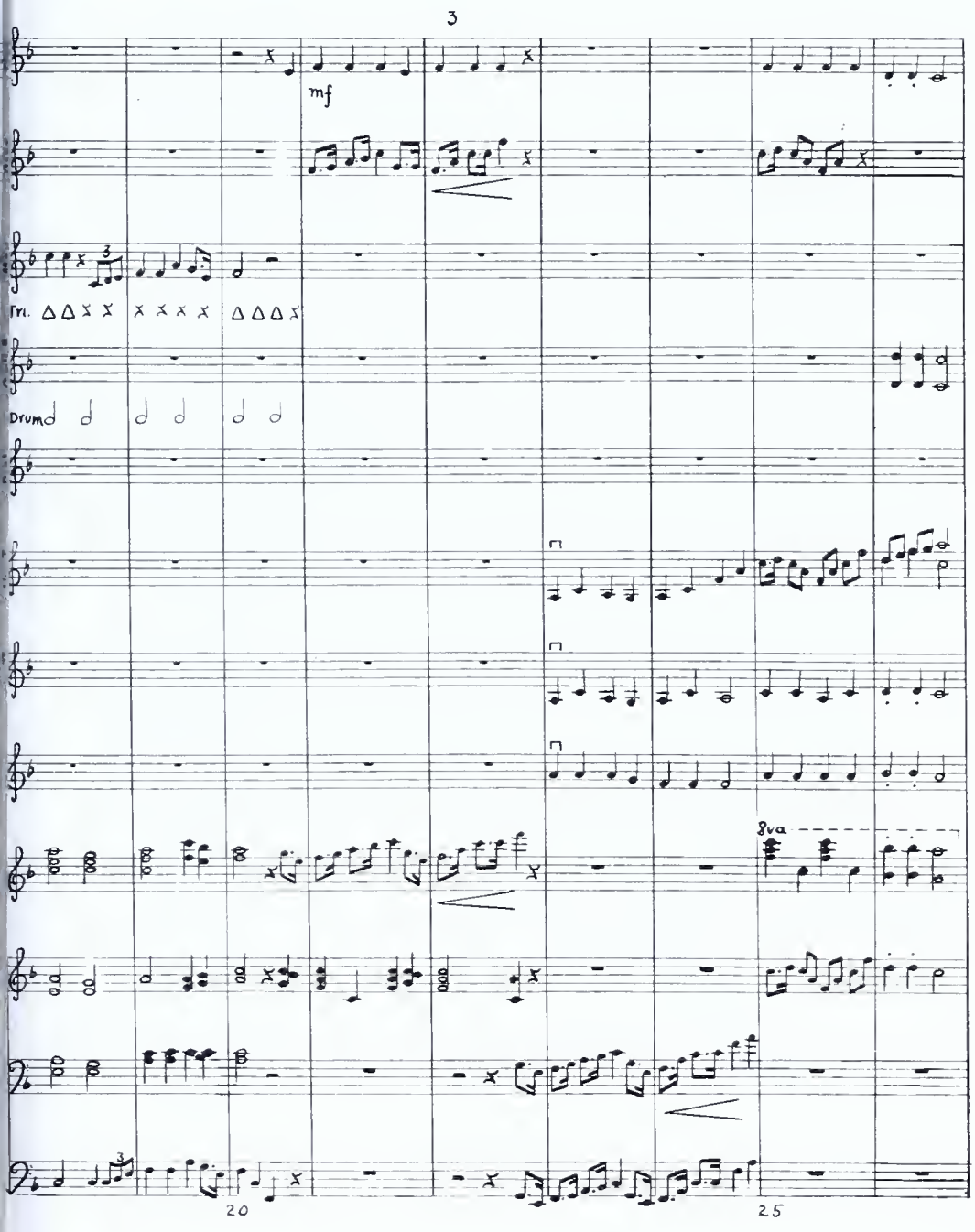
PART V

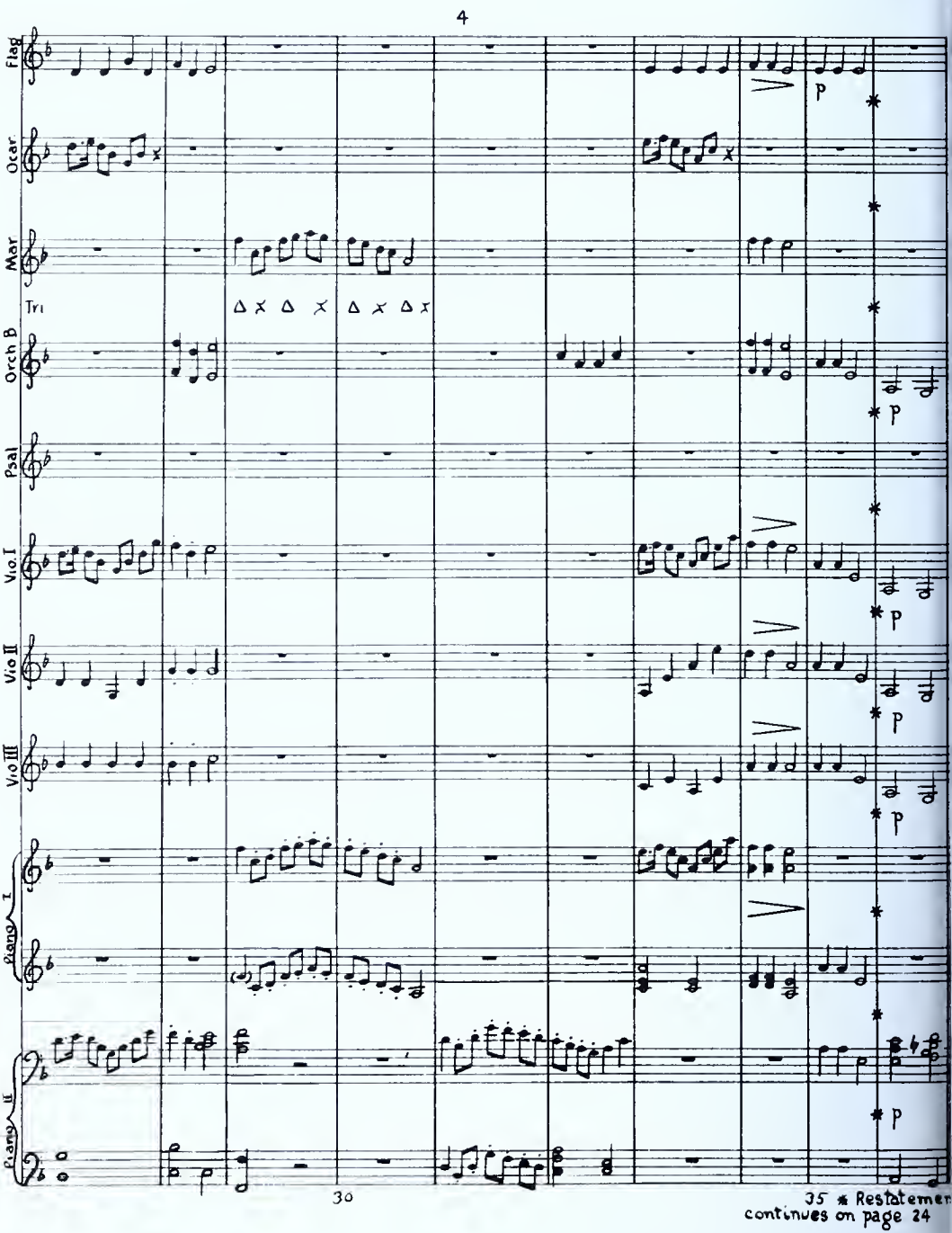
THE ORCHESTRAL SCORE OF LINCOLN SCHOOL SYMPHONY NO. 3

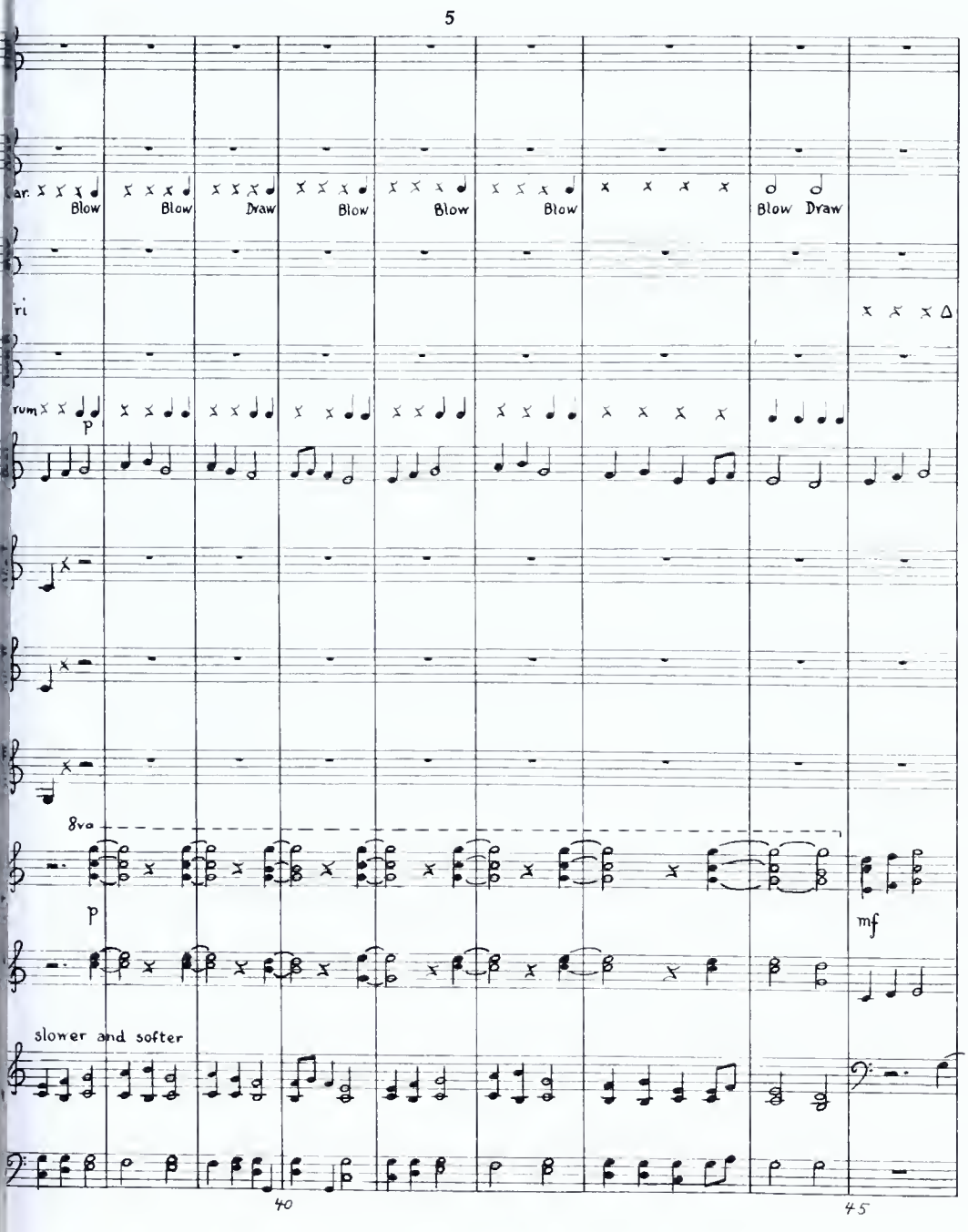
I. ALLEGRO
II. ANDANTE
III. MENUETTO
IV. RONDO

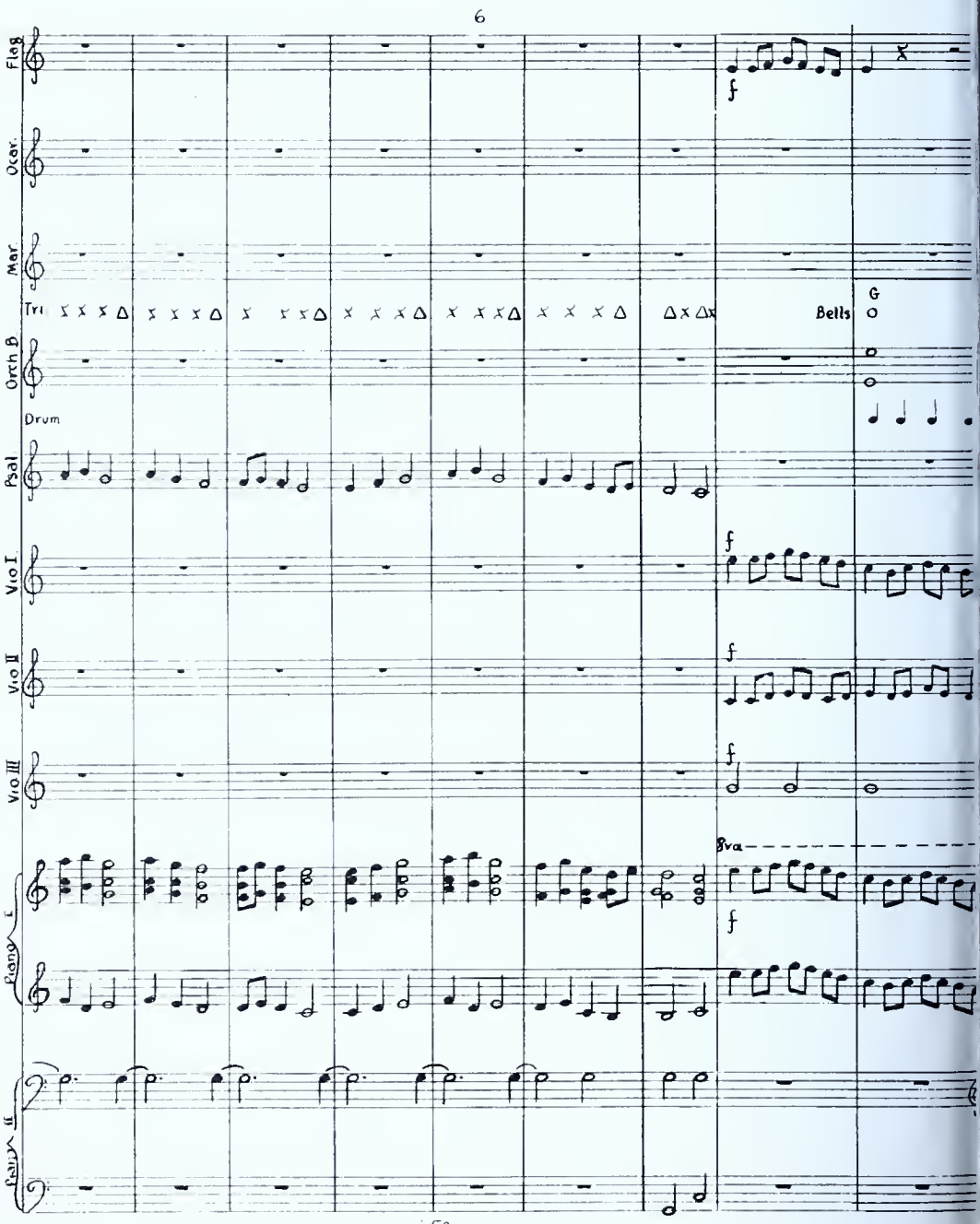

I ALLEGRO
1
Statement
Harmonica
mf
Triangle
Bells
A Bell
Drum
mf
8va
mf
mf
5

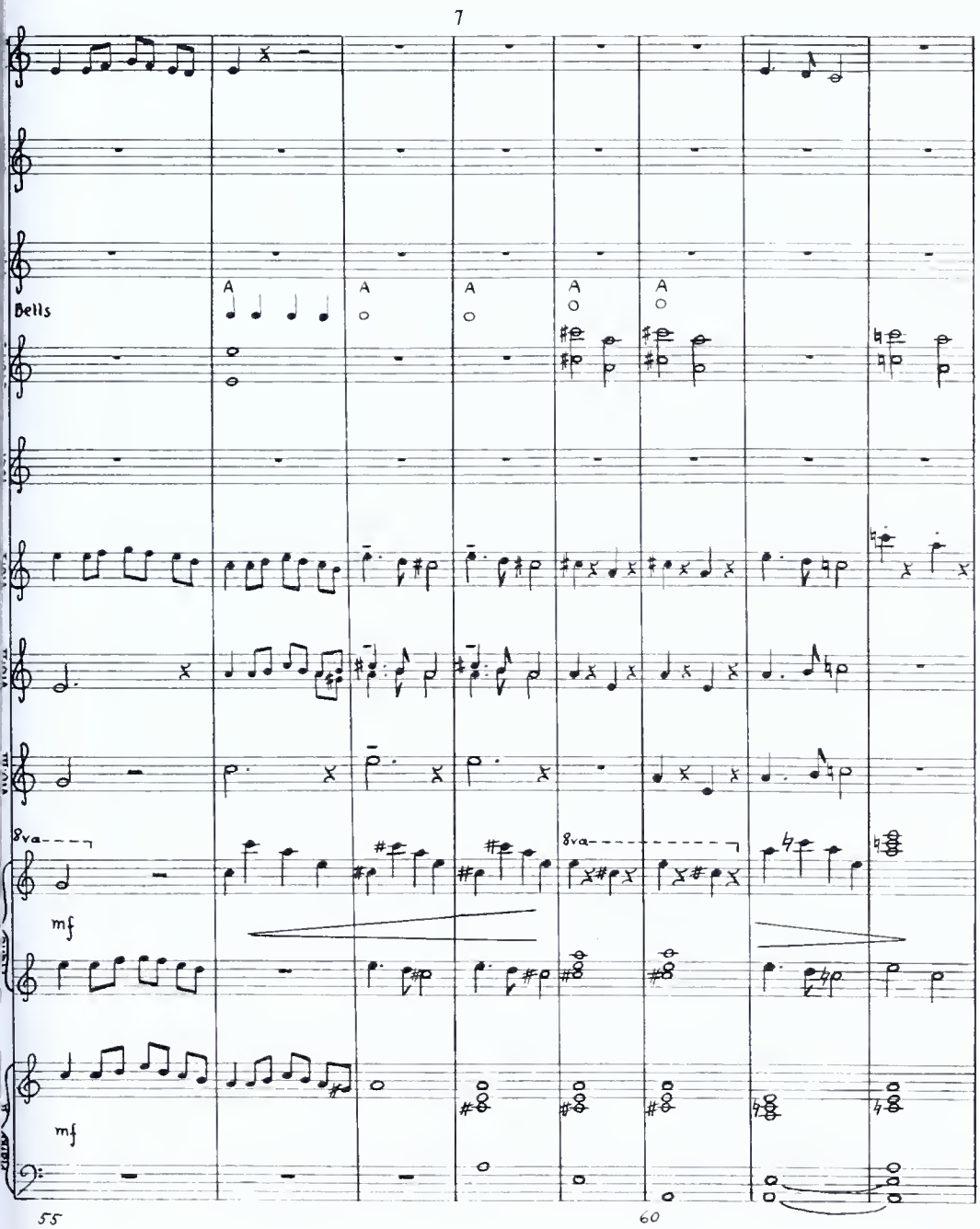

2
Flag
Oear
Mar
Tri
Orch B.
Drum
Psal
Vio I
Vio II
Vio III
Piano I
Piano II
p
mf
10
15


3
mf
Tri.
Drum
8va
20
25


4
Flag
Ocar
Mar
Tri
Orch B
Psal
Vio I
Vio II
Vio III
Piano I
Piano II
p
30
35 * Restatemen
continues on page 24


5
ar.
Blow
Blow
Draw
Blow
Blow
Blow
Blow
Draw
ri
rum
p
8va
p
mf
slower and softer
40
45


6
Flag
Ocar.
Mar
Tri
Orch B
Drum
Bells
G
Psal
Vio I
Vio II
Vio III
8va
Piano I
Piano II
50

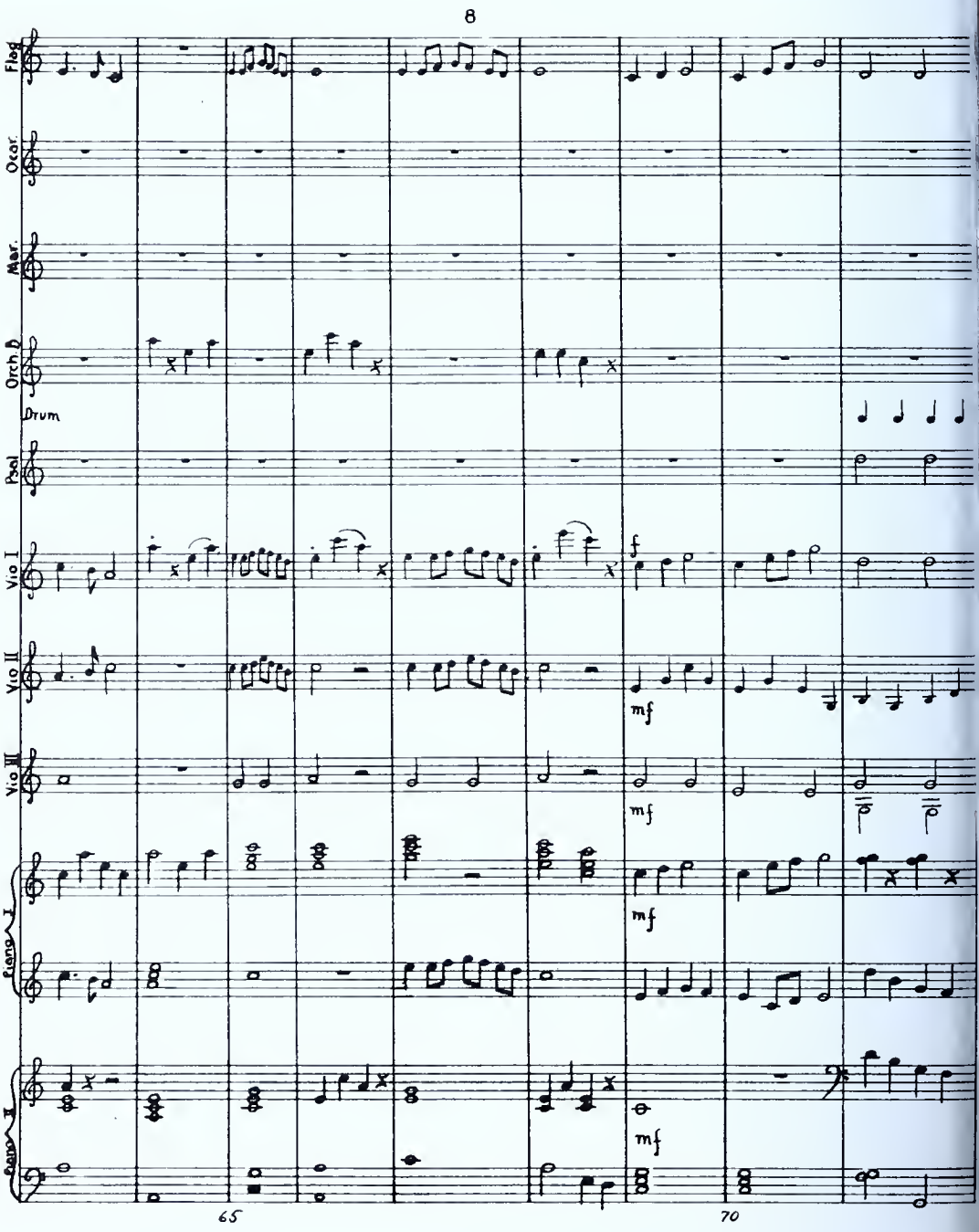

7
Bells
A
A
A
A
A
8va
mf
8va
mf
55
60

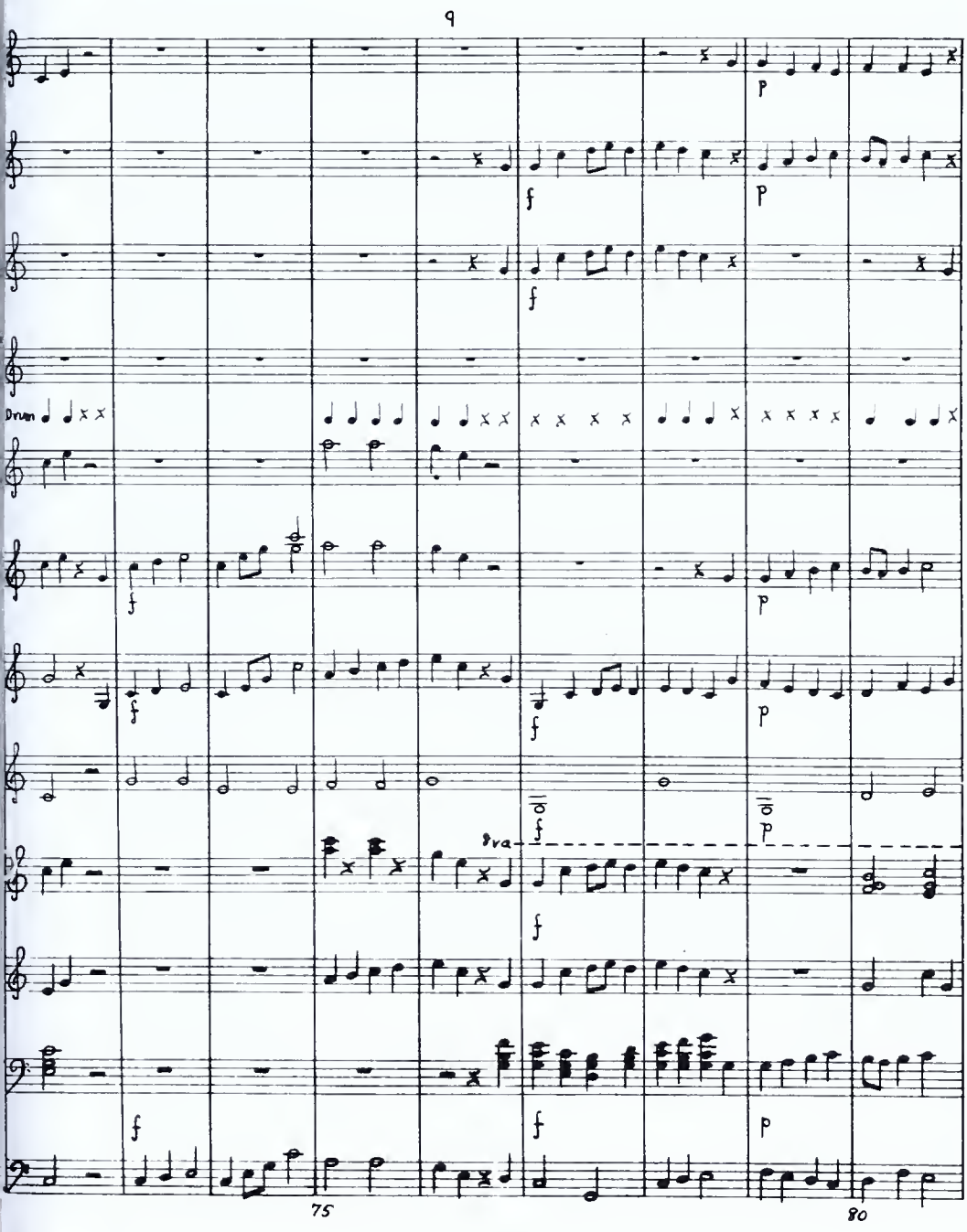
8

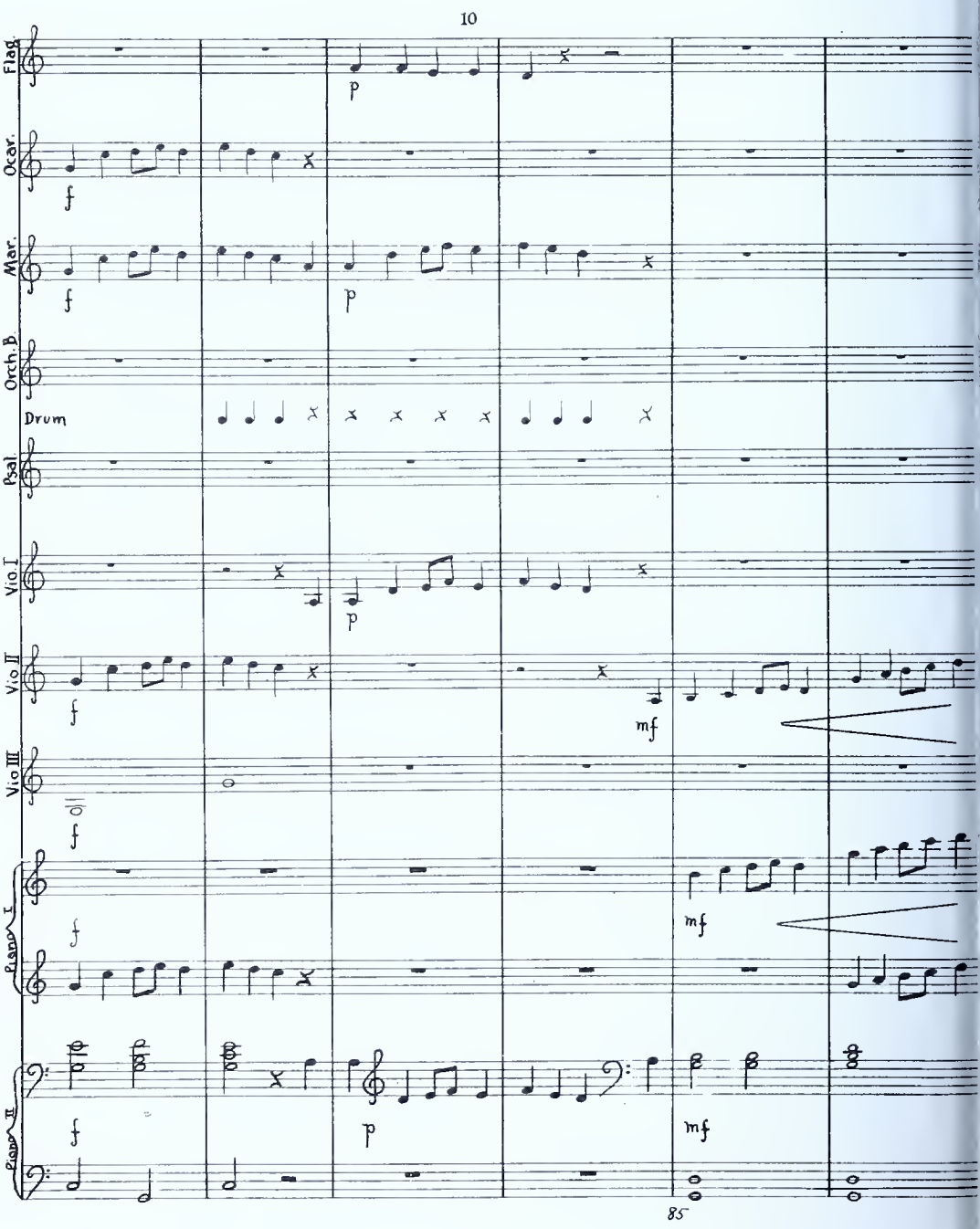
Flag.
Ocar.
Mar.
Orch. B
Drum
Psal.
Vio I
Vio II
Vio III
Piano I
Piano II

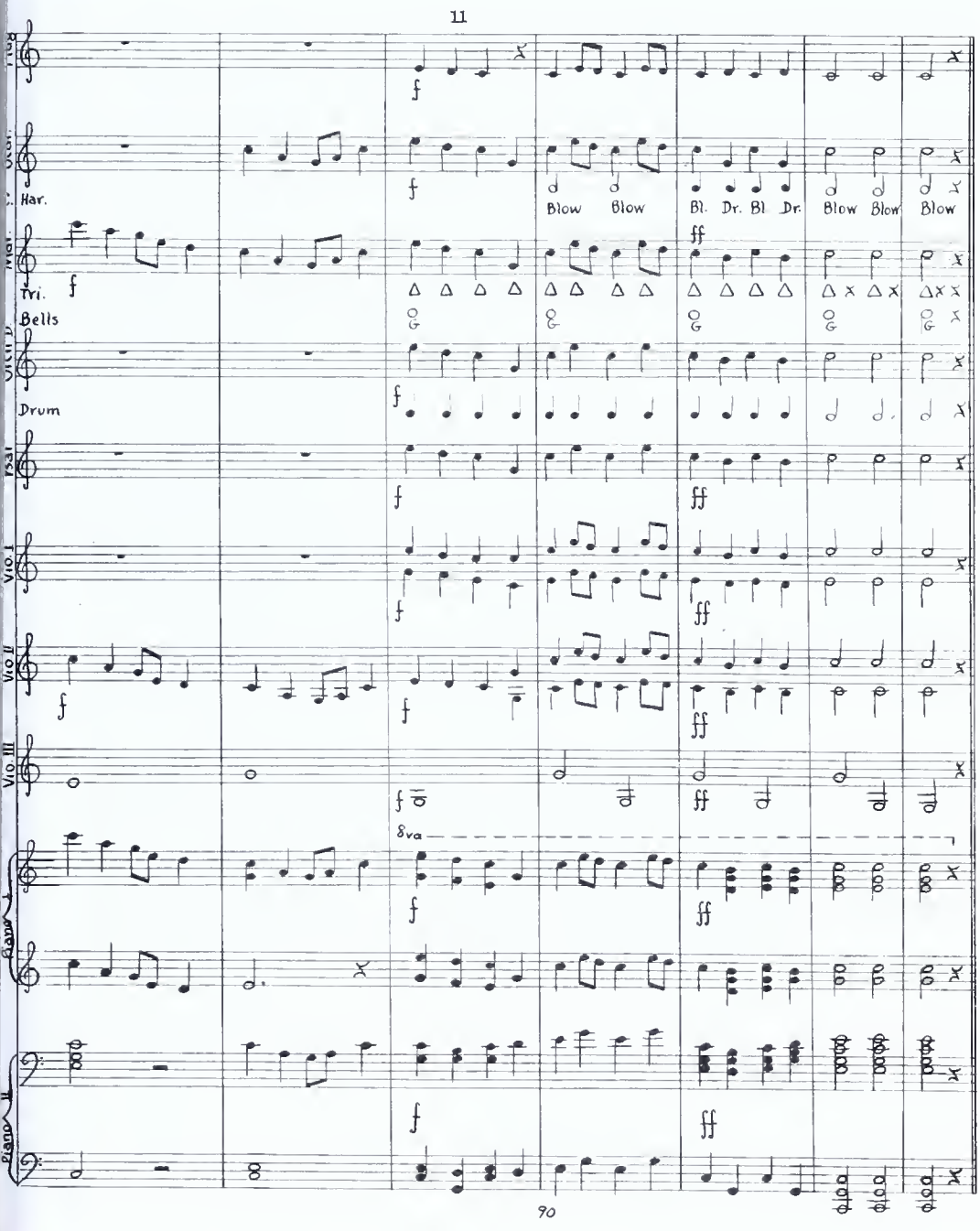
f
mf
mf
mf
mf

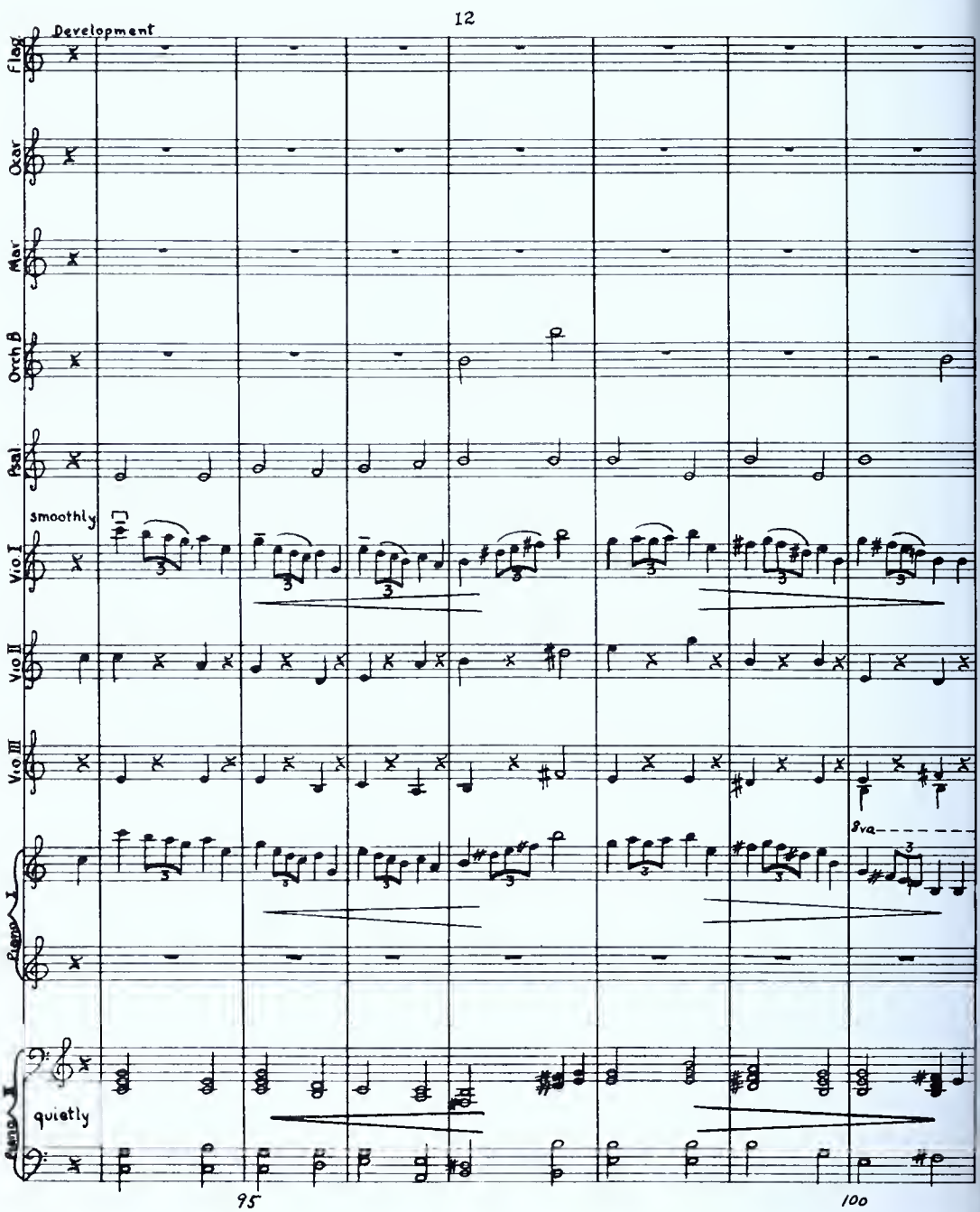
65
70

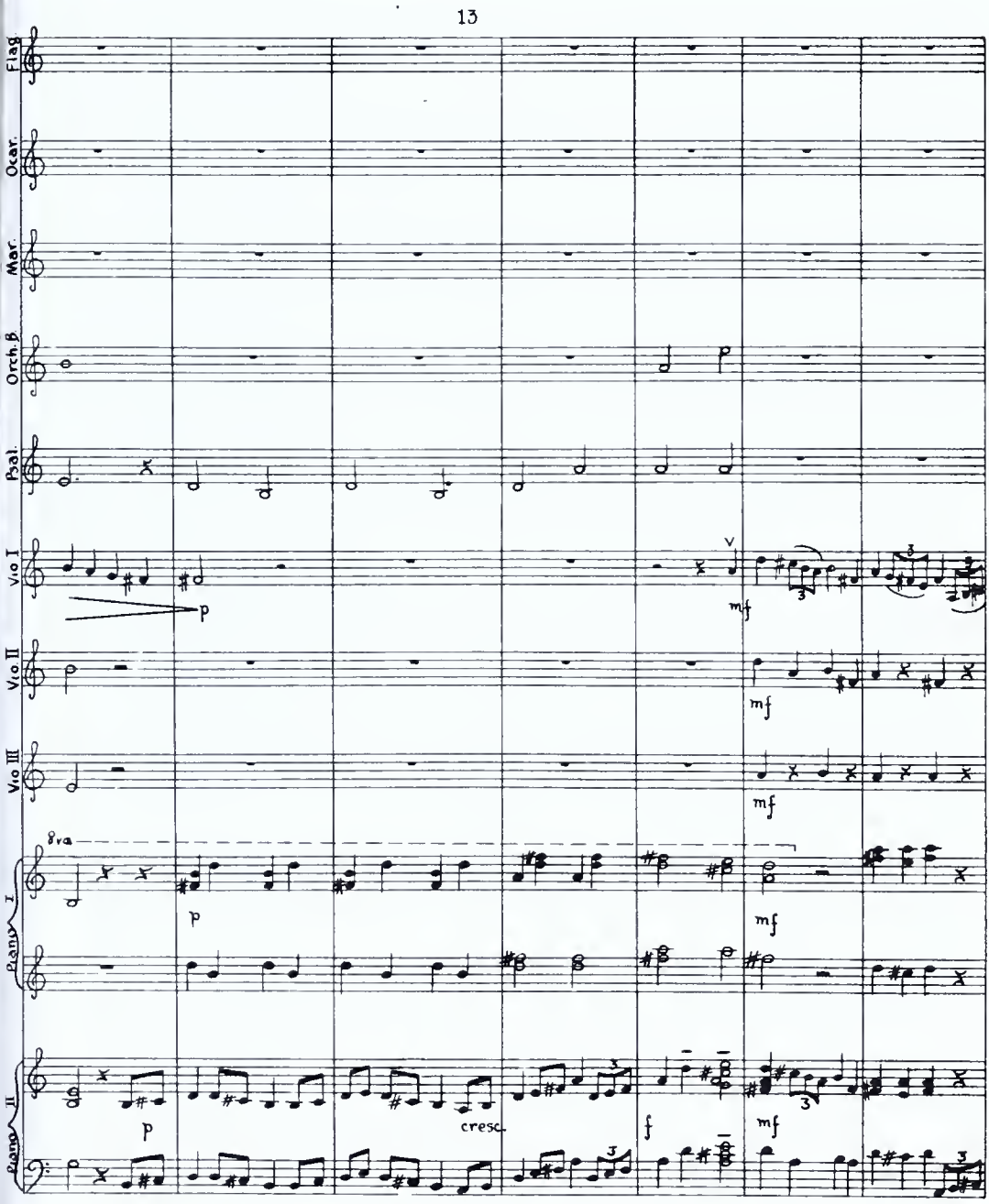


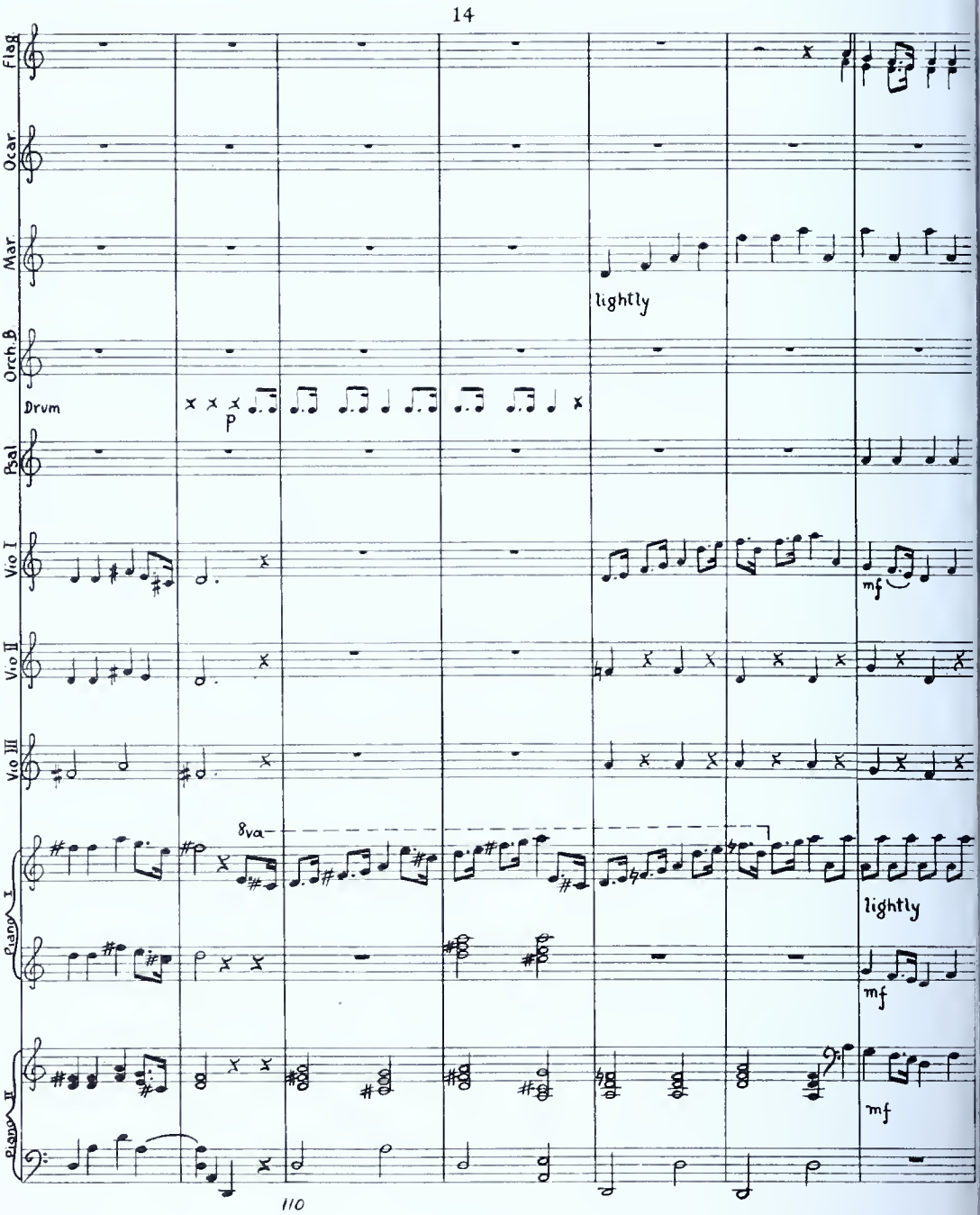

9
Drum
8va
75
80

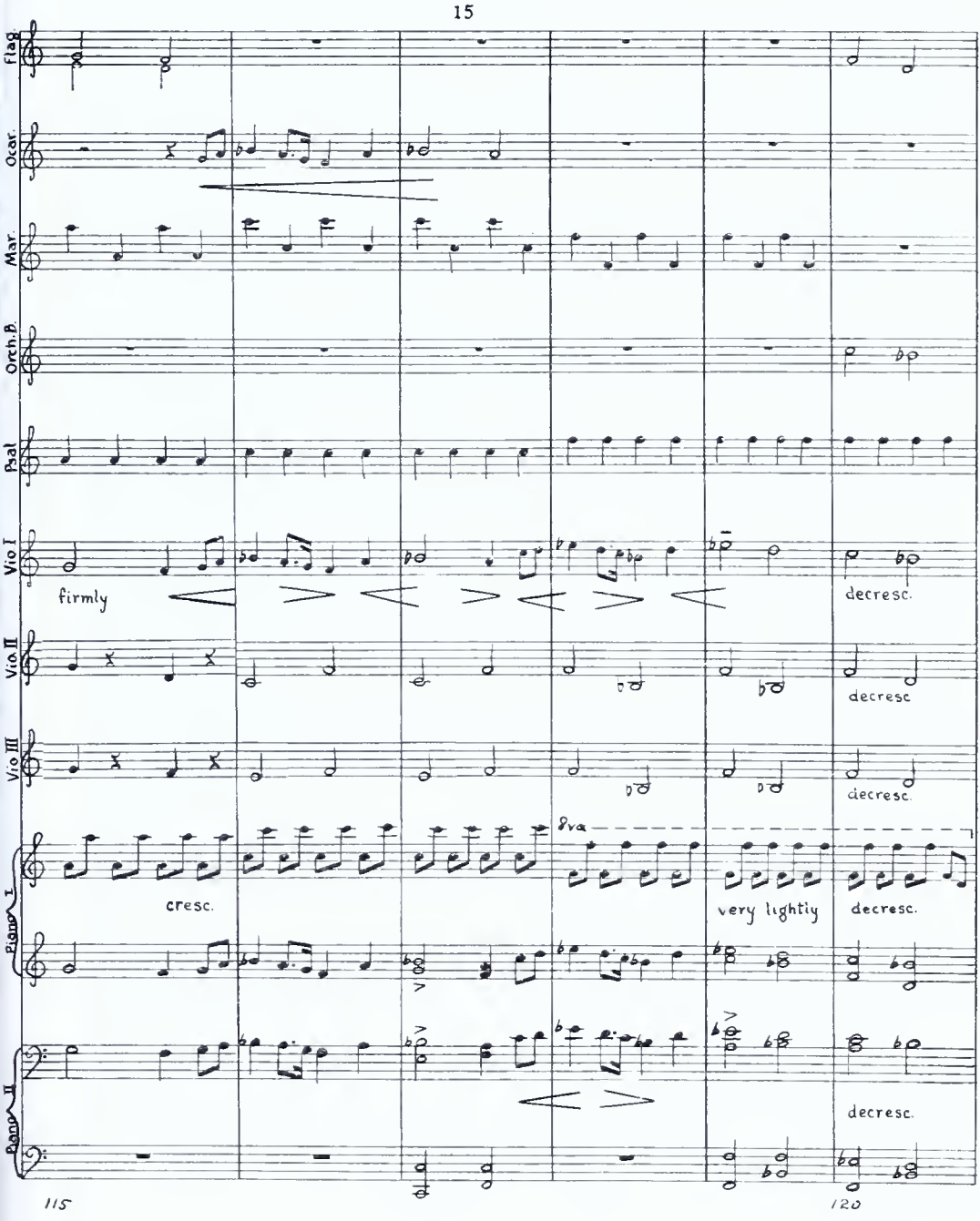

10
Flag.
Ocar.
Mar.
Orch.B
Drum
Psal
Vio I
Vio II
Vio III
Piano I
Piano II
p
f
mf
85

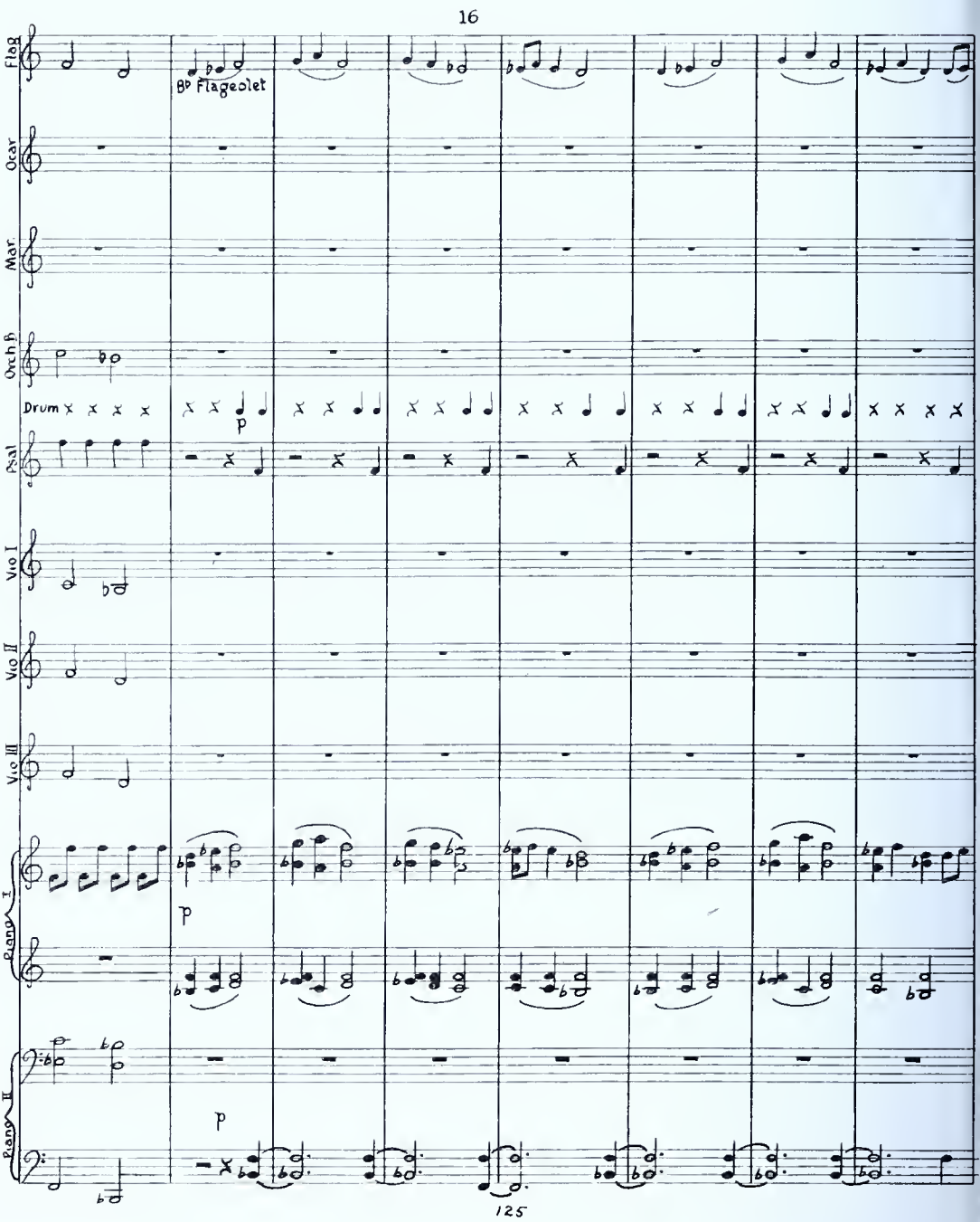

11
Har.
Blow Blow Bl. Dr. Bl. Dr. Blow Blow Blow
Tri.
Bells
Drum
8va
90

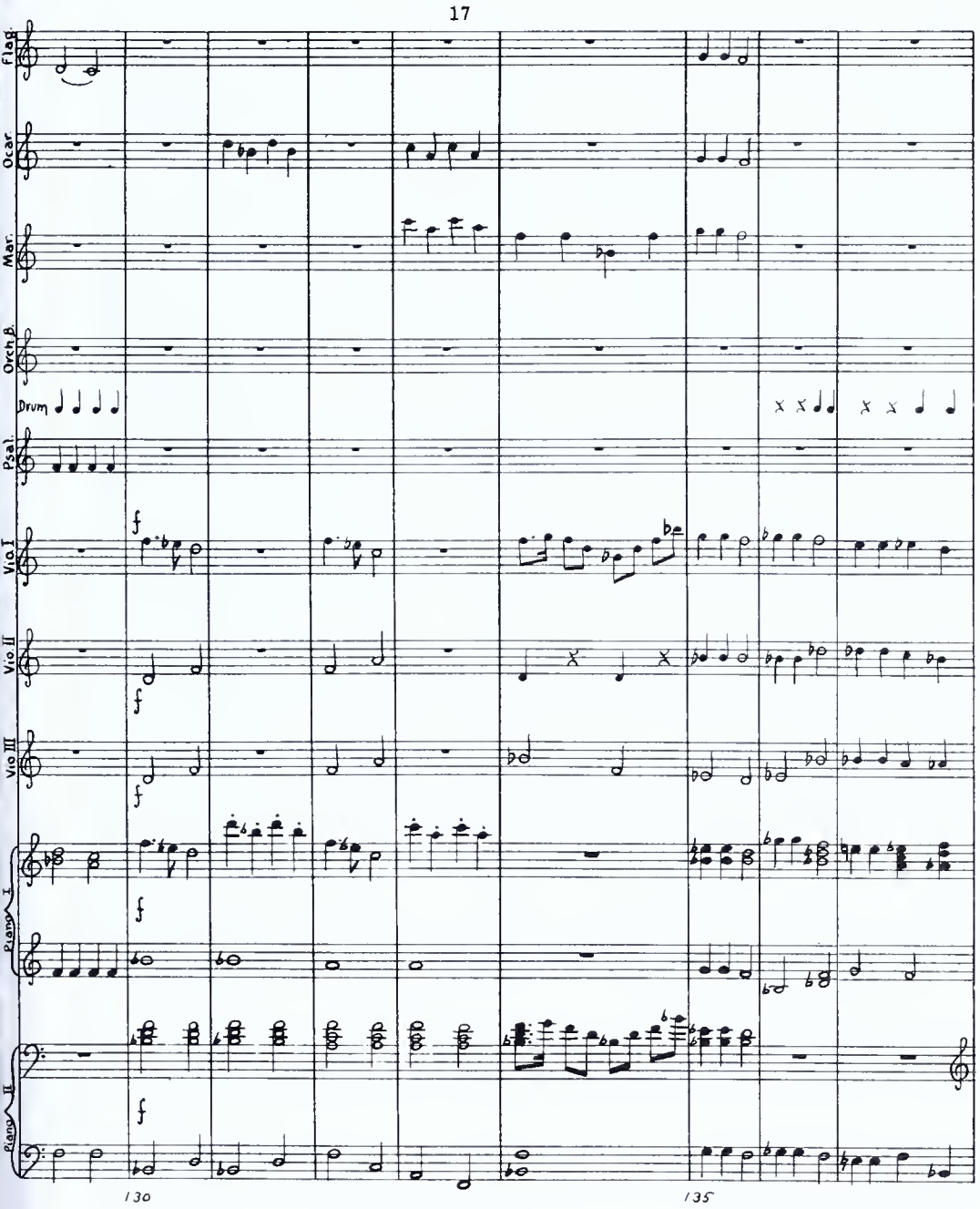

12
Development
Flag
Oear
Mar
Orch B
Psal
smoothly
Vio I
Vio II
Vio III
8va
Piano I
quietly
Piano II
95
100

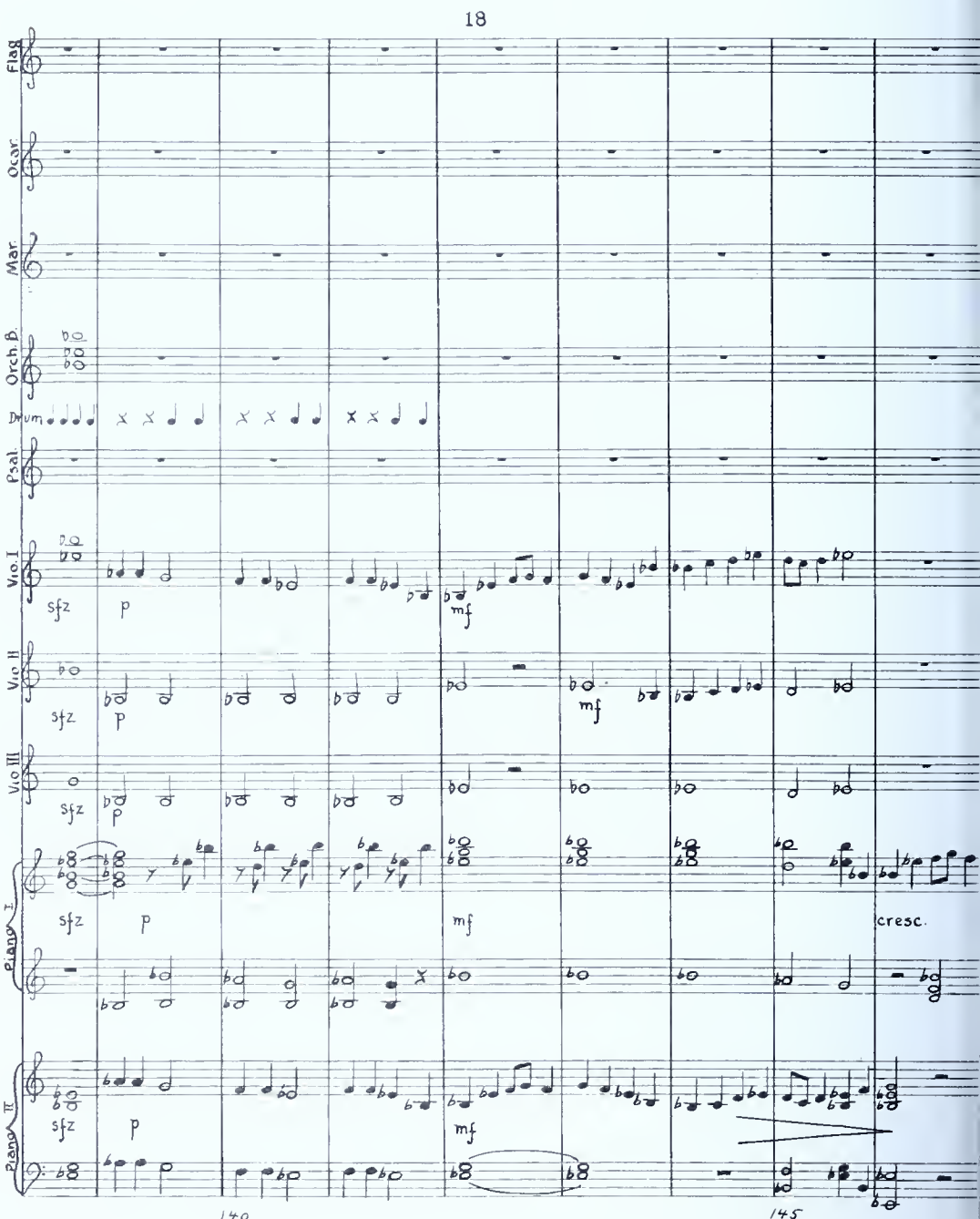

13
Flag.
Oear.
Mar.
Orch.β
Psal.
Vio I
Vio II
Vio III
8va
Piano I
Piano II
p
mf
cresc.
f
105

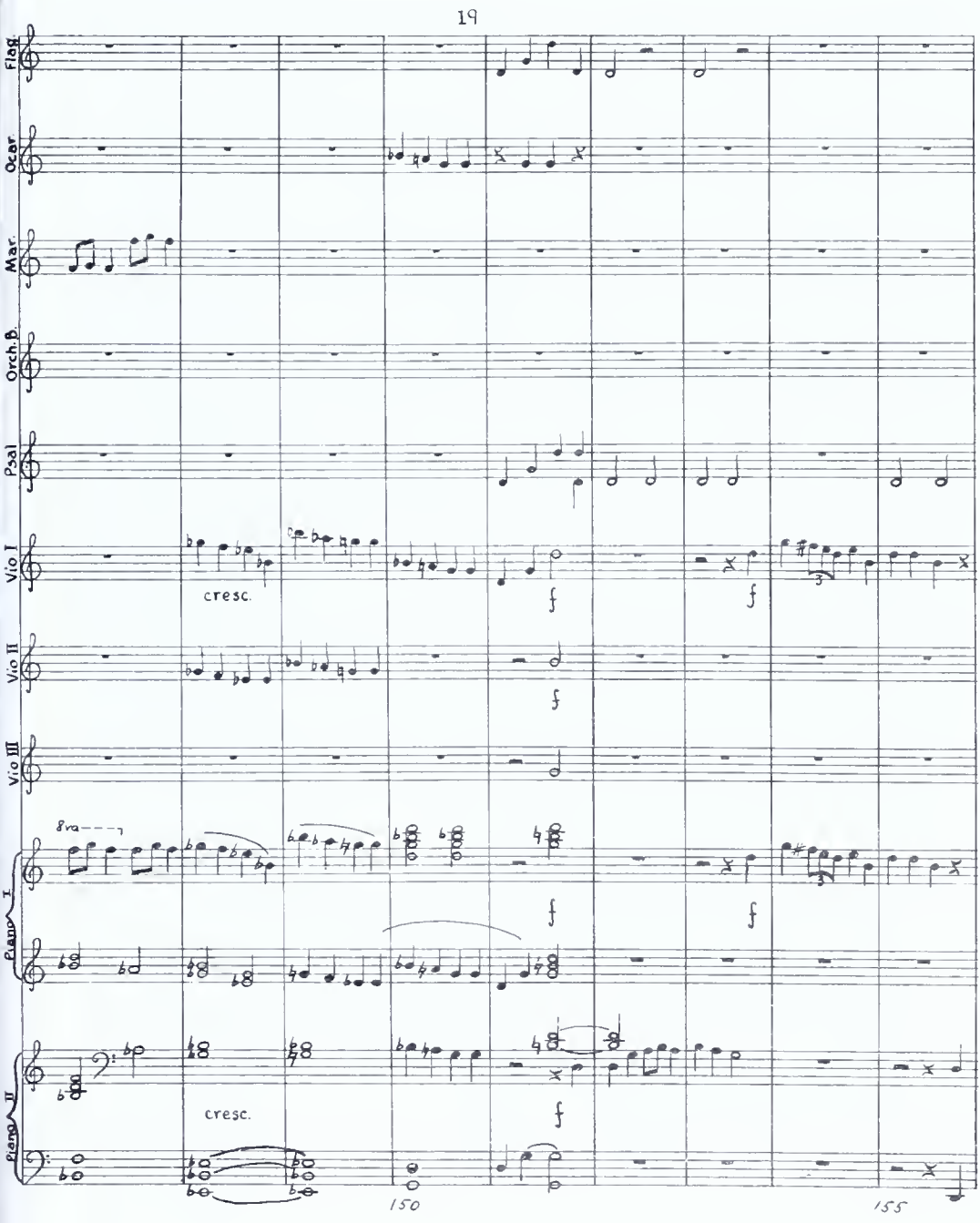

14
Flag.
Ocar.
Mar.
lightly
Orch.B
Drvm
p
Psal.
Vio I
mf
Vio II
Vio III
8va
Piano I
lightly
mf
Piano II
mf
110

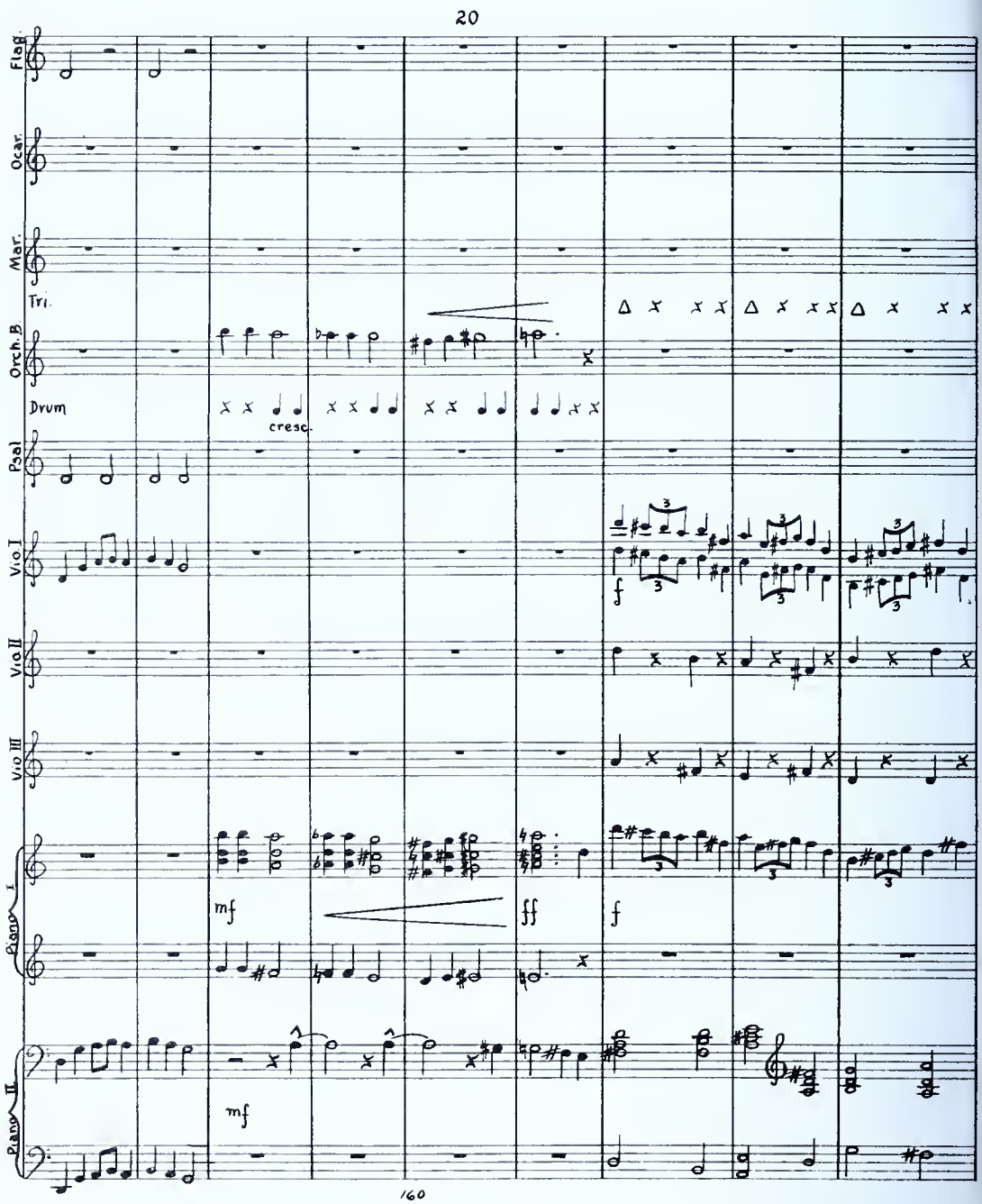

15
Flag.
Ocar.
Mar.
Orch.B.
Psal.
Vio I
firmly
decresc.
Vio II
decresc
Vio III
decresc.
8va
cresc.
very lightly
decresc.
Piano I
Piano II
decresc.
115
120

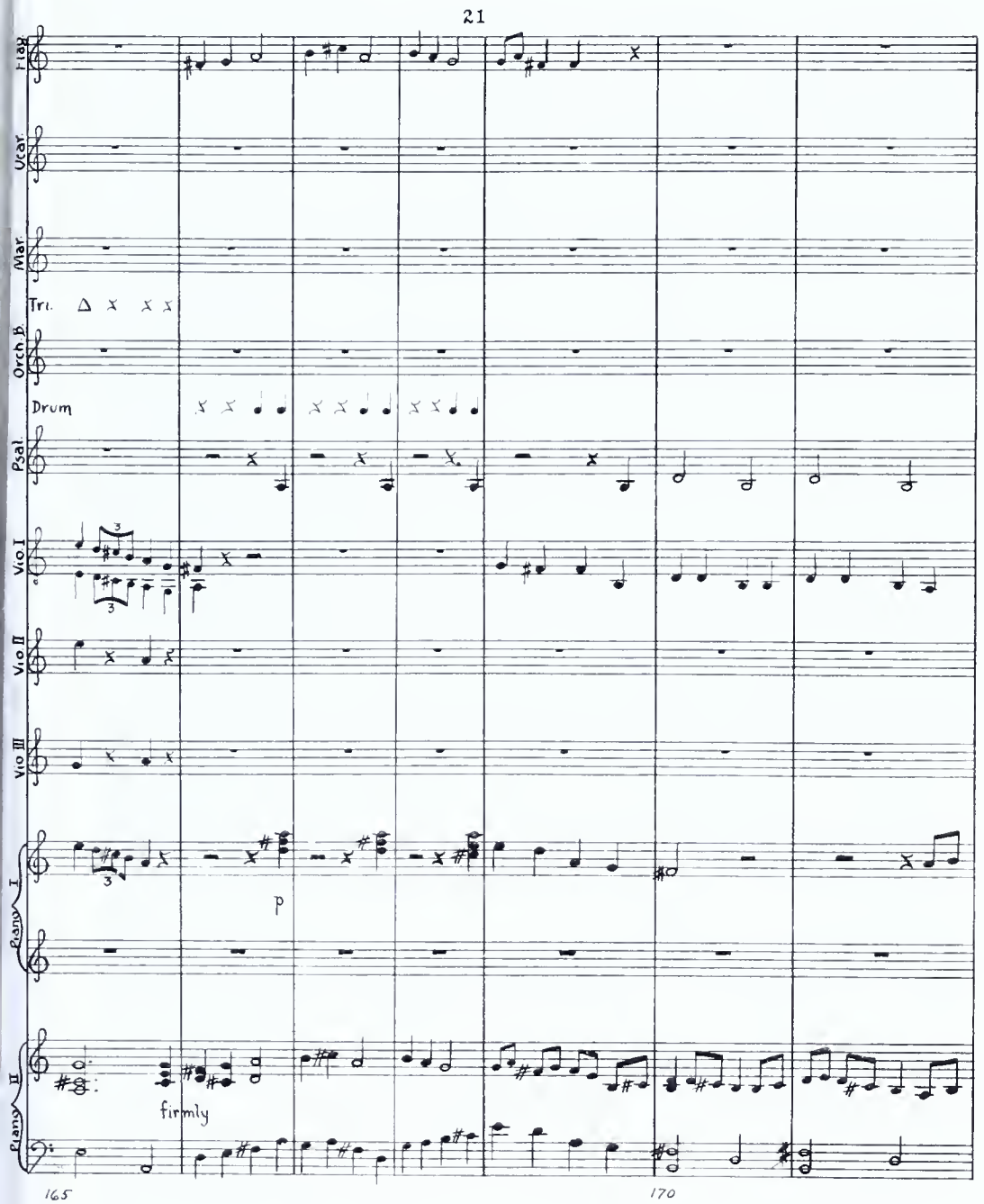

16
Flag
Bb Flageolet
Oear
Mar
Orch B
Drum
p
Psal
Vio I
Vio II
Vio III
Piano I
p
Piano II
p
125

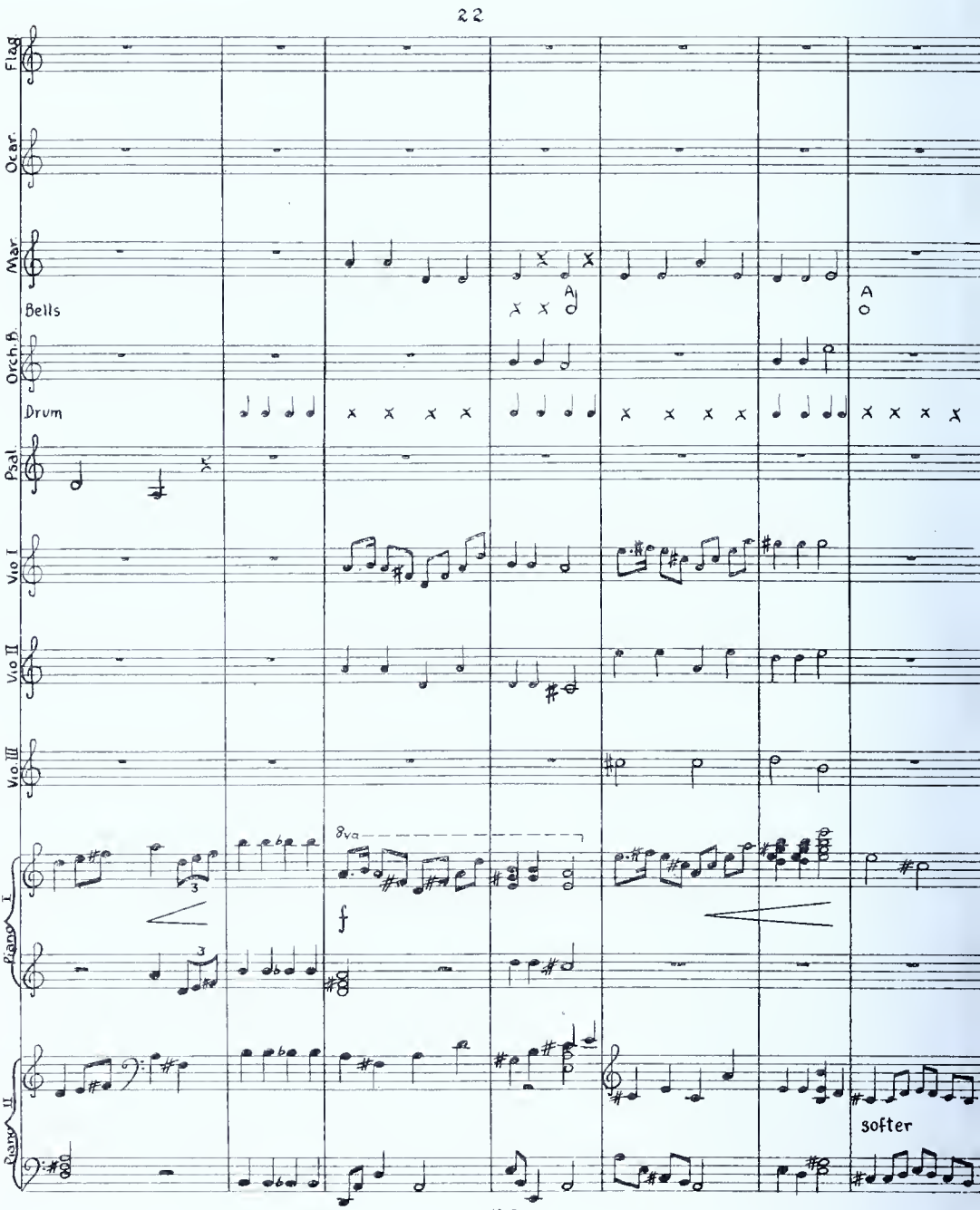

17
Flag.
Ocar
Mar.
Orch B.
Drum
Psal.
Vio I
Vio II
Vio III
Piano I
Piano II
f
130
135

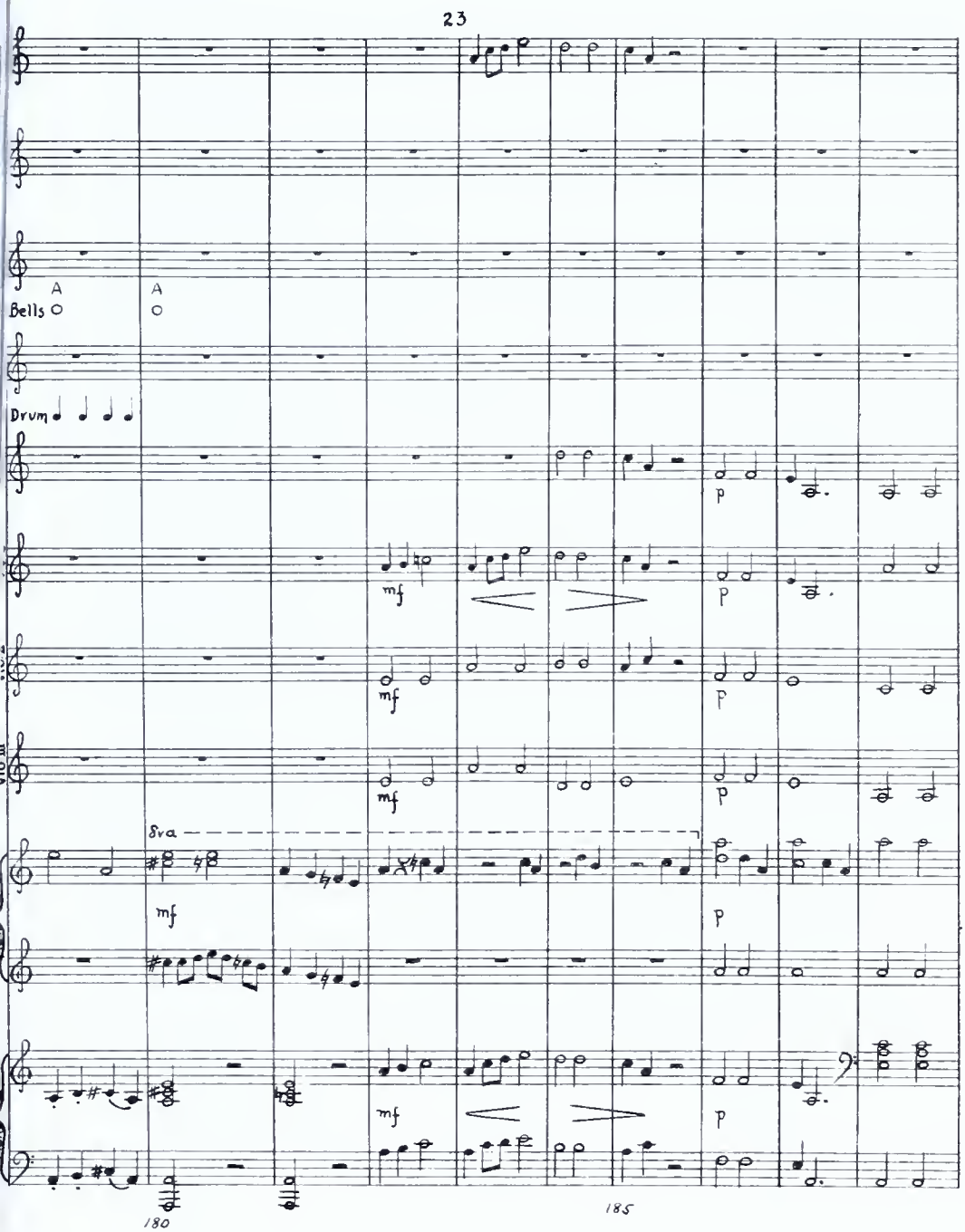

18
Flag
Ocar.
Mar.
Orch.B.
Drum
Psal.
Vio.I
Vio.II
Vio.III
Piano I.
Piano II.
sfz
p
mf
cresc.
140
145

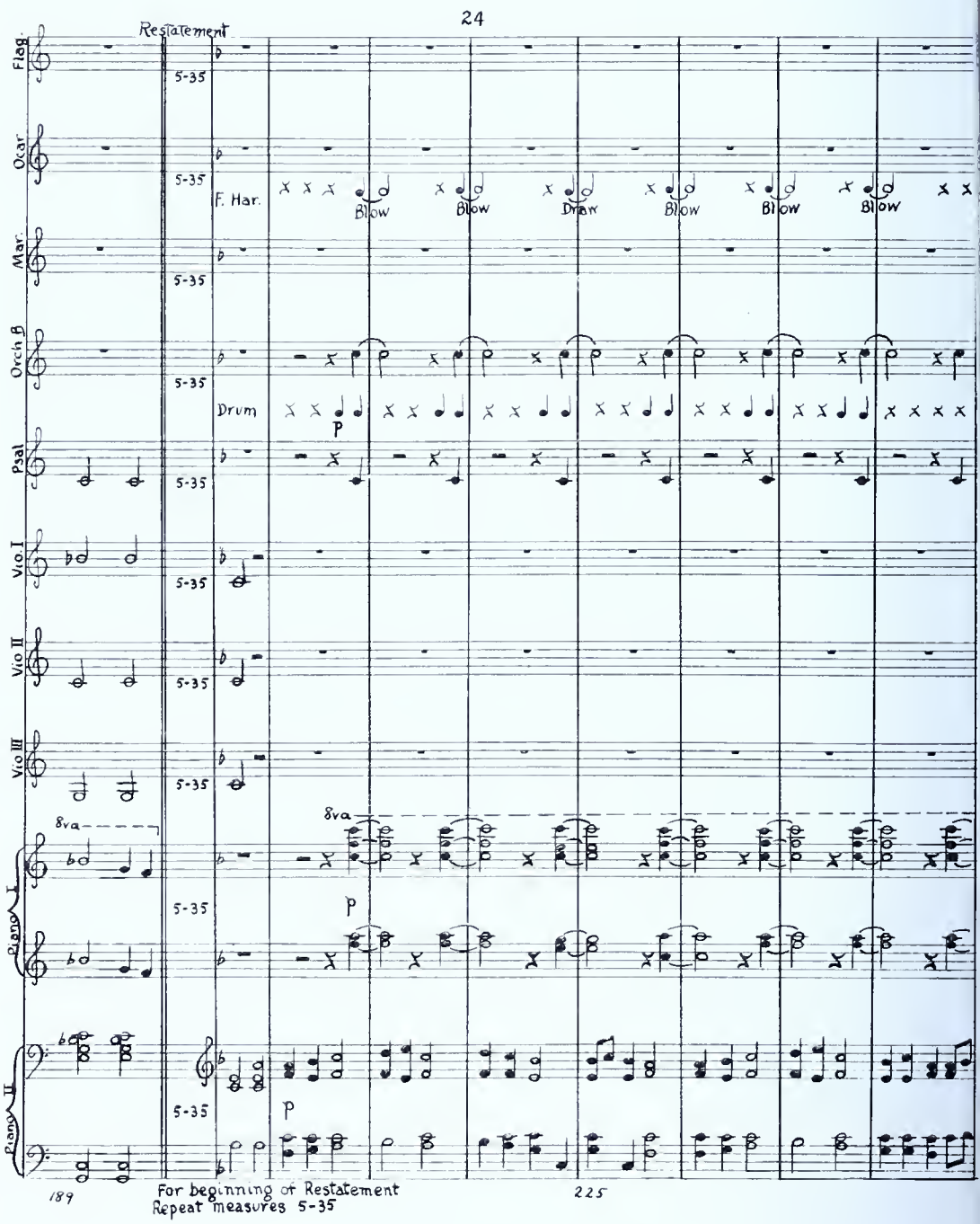

19
Flag.
Oear
Mar.
Orch.B.
Psal
Vio I
Vio II
Vio III
Piano I
Piano II
cresc.
cresc.
8va
150
155

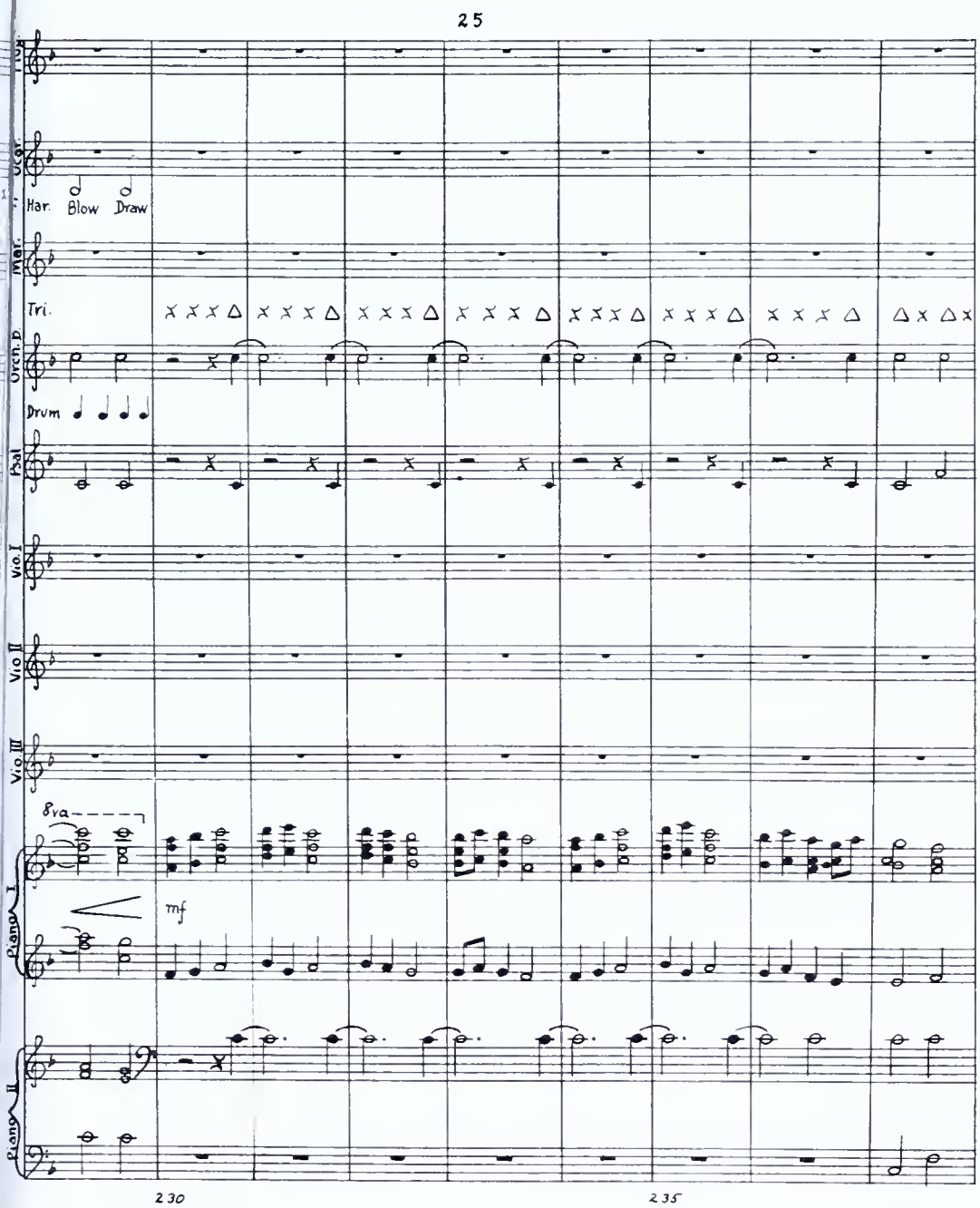

20
Flag.
Ocar.
Marc.
Tri.
Orch.B
Drum
cresc.
Psal
Vio I
Vio II
Vio III
Piano I
mf
ff
f
Piano II
mf
160

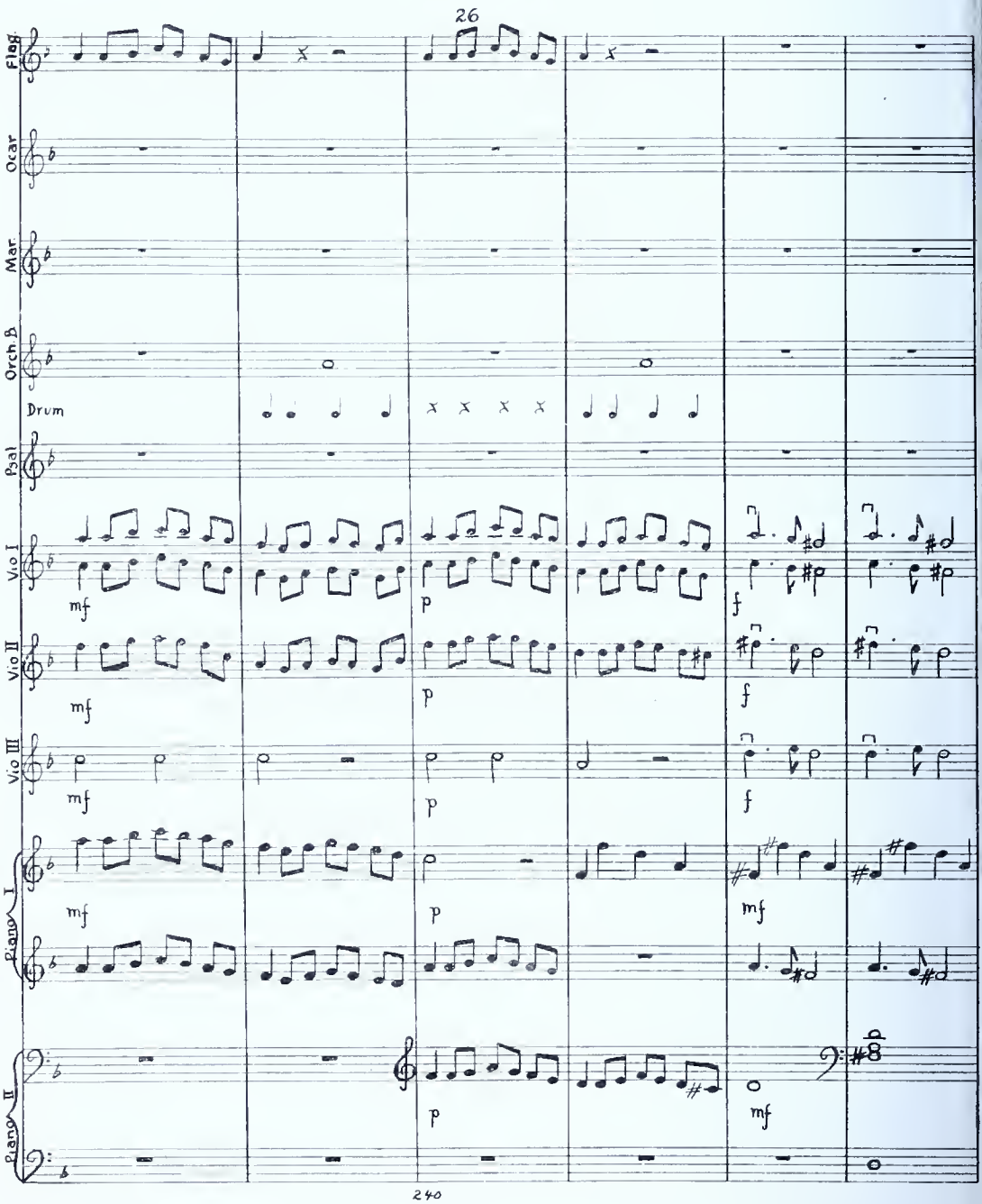

21
Flag.
Ucar.
Mar.
Tri.
Orch.B.
Drum
Psal.
Vio.I
Vio.II
Vio.III
Piano I
Piano II
p
firmly
165
170

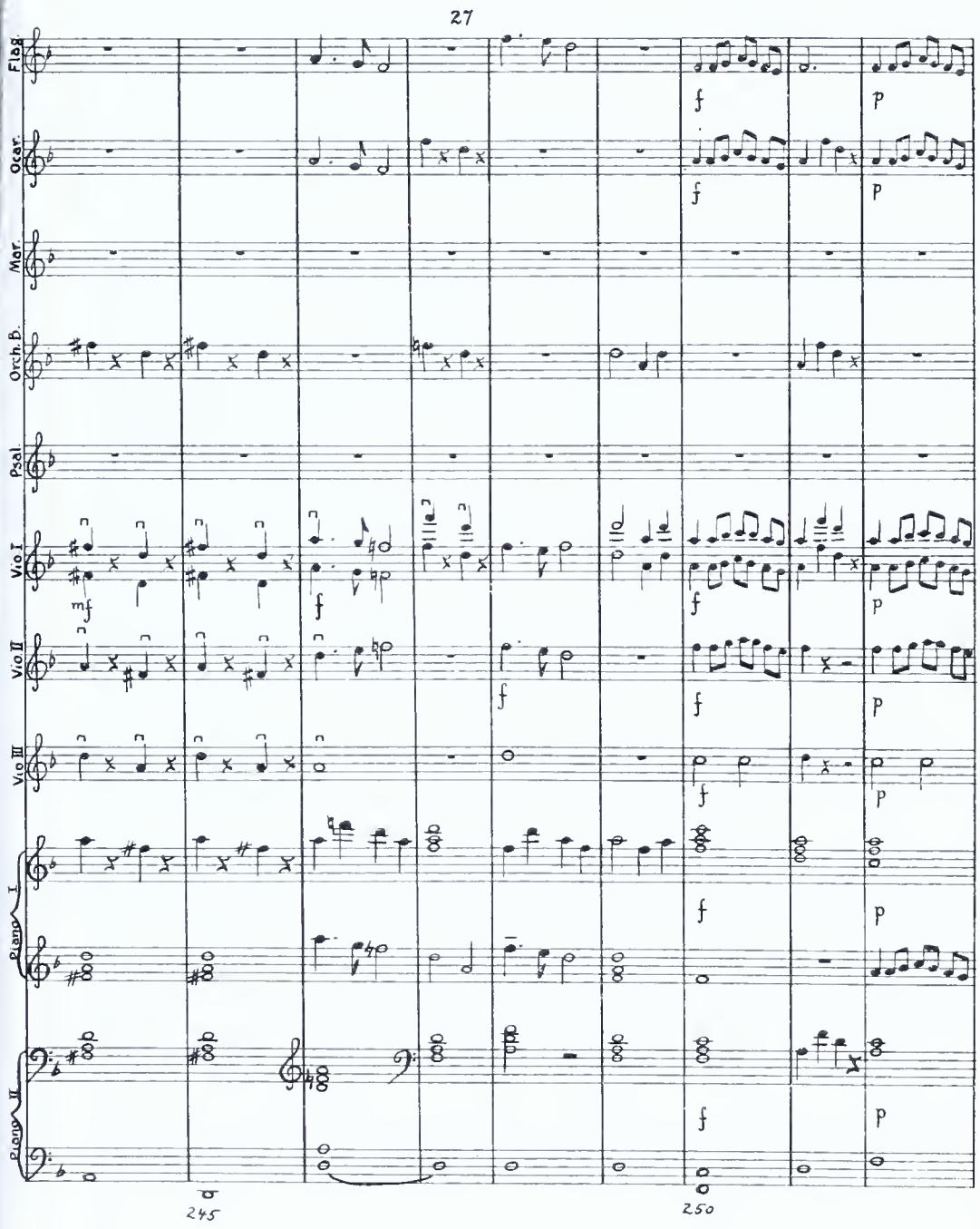

22
Flag
Ocar.
Mar
Bells
Orch.B
Drum
Psal
Vio I
Vio II
Vio III
8va
f
Piano I
Piano II
softer
175

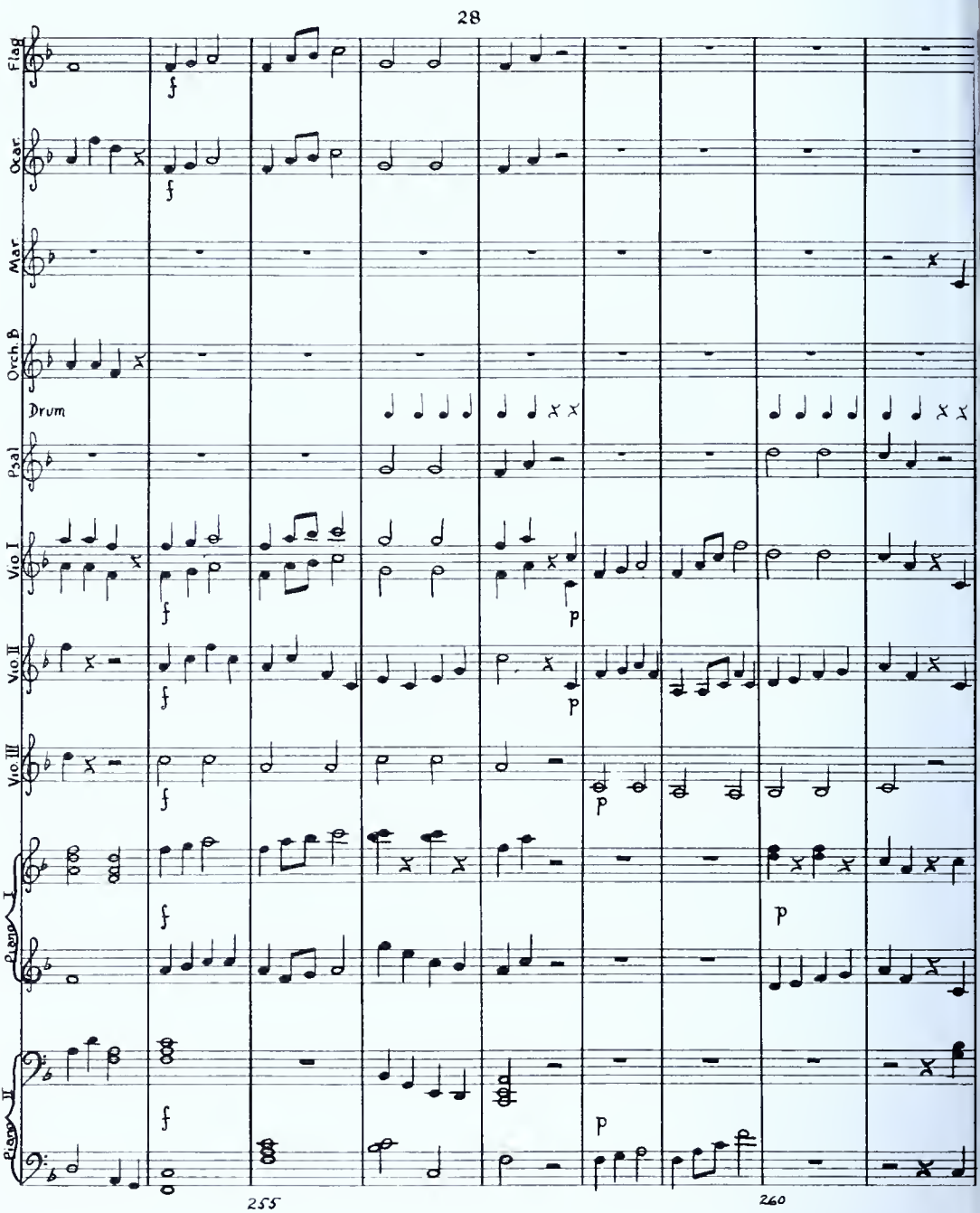

23
A
Bells
A
Drum
mf
p
8va
180
185

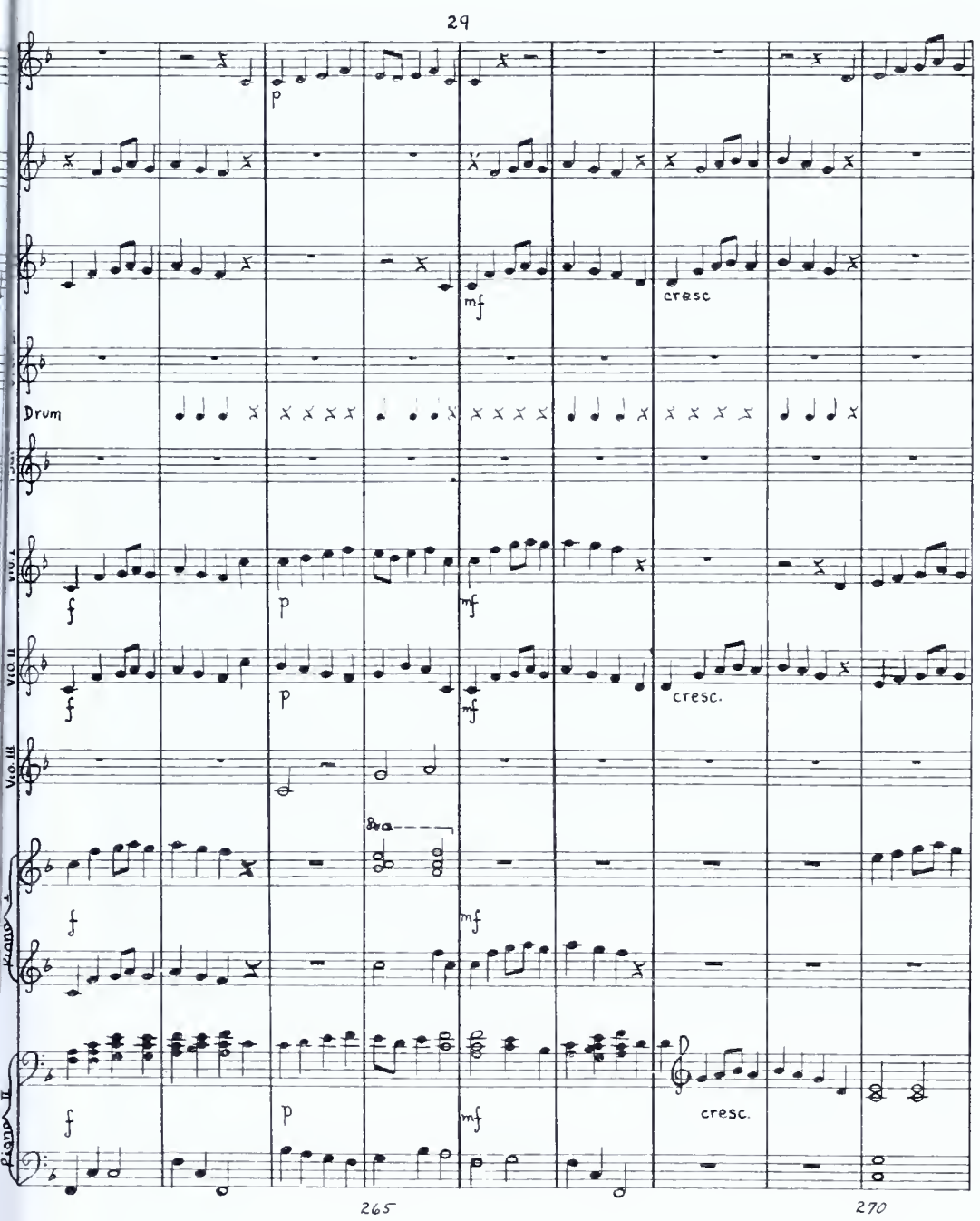

24
Restatement
Flag.
Oar.
Mar.
Orch B
Psal
Vio I
Vio II
Vio III
Piano I
Piano II
5-35
F. Har.
Blow
Blow
Draw
Blow
Blow
Blow
Drum
p
8va
189
For beginning of Restatement
Repeat measures 5-35
225

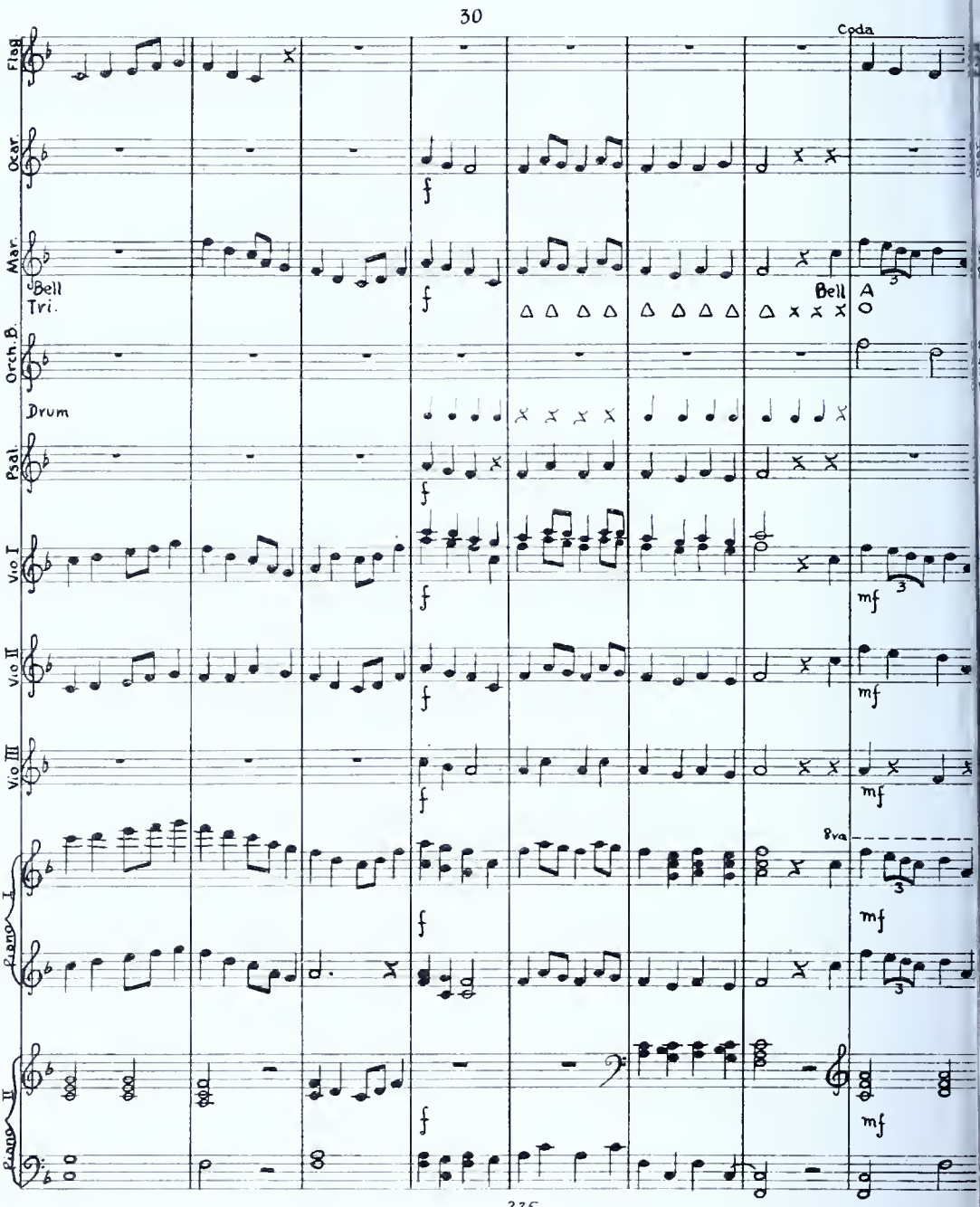

25
Fl.
Ocar.
Har.
Blow
Draw
Mar.
Tri.
Orch. D.
Drum
Pal.
Vio. I
Vio. II
Vio. III
8va
mf
Piano I
Piano II
230
235

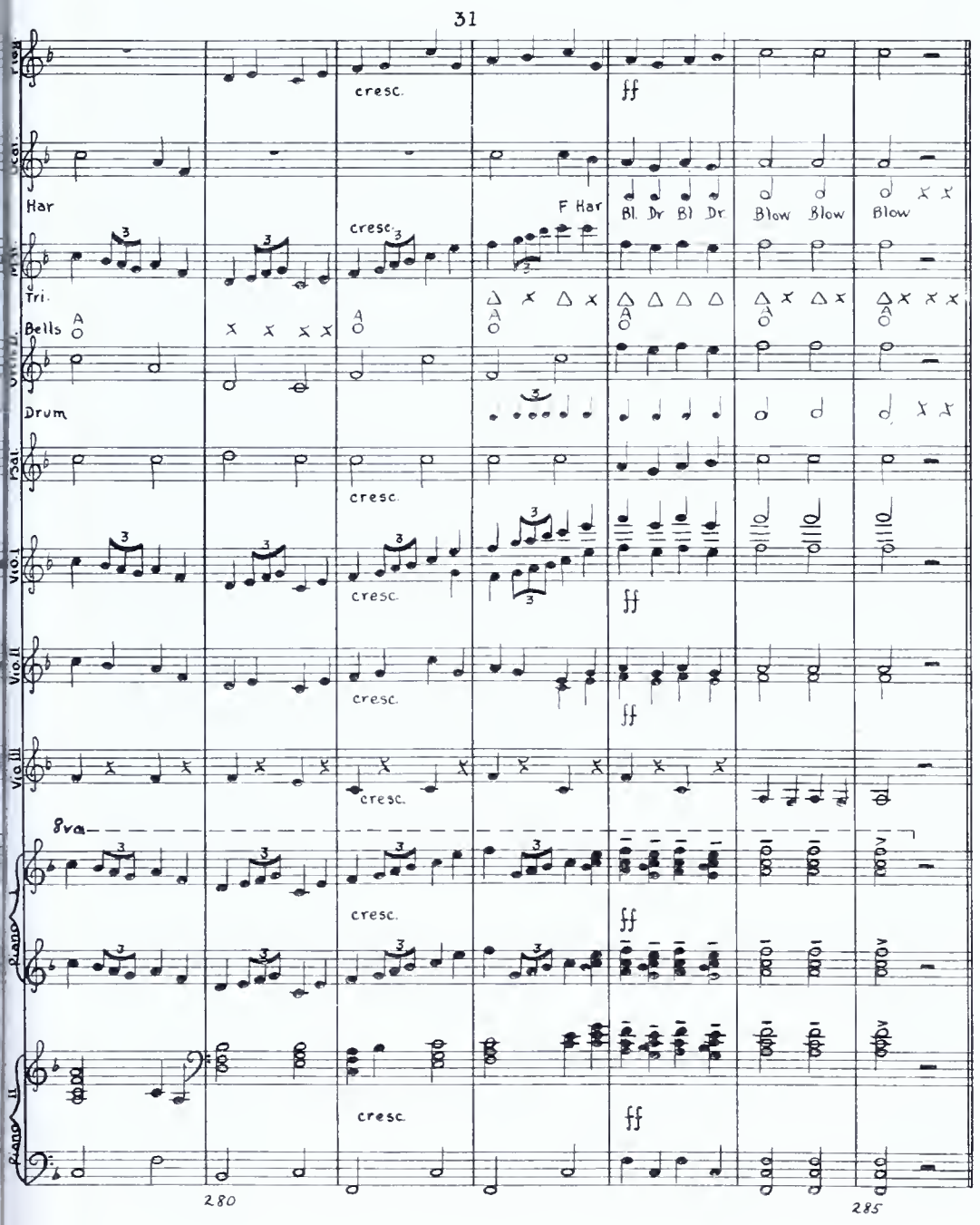

26
Flag
Ocar
Mar
Orch B
Drum
Psal
Vio I
Vio II
Vio III
Piano I
Piano II
mf
p
f
mf
240

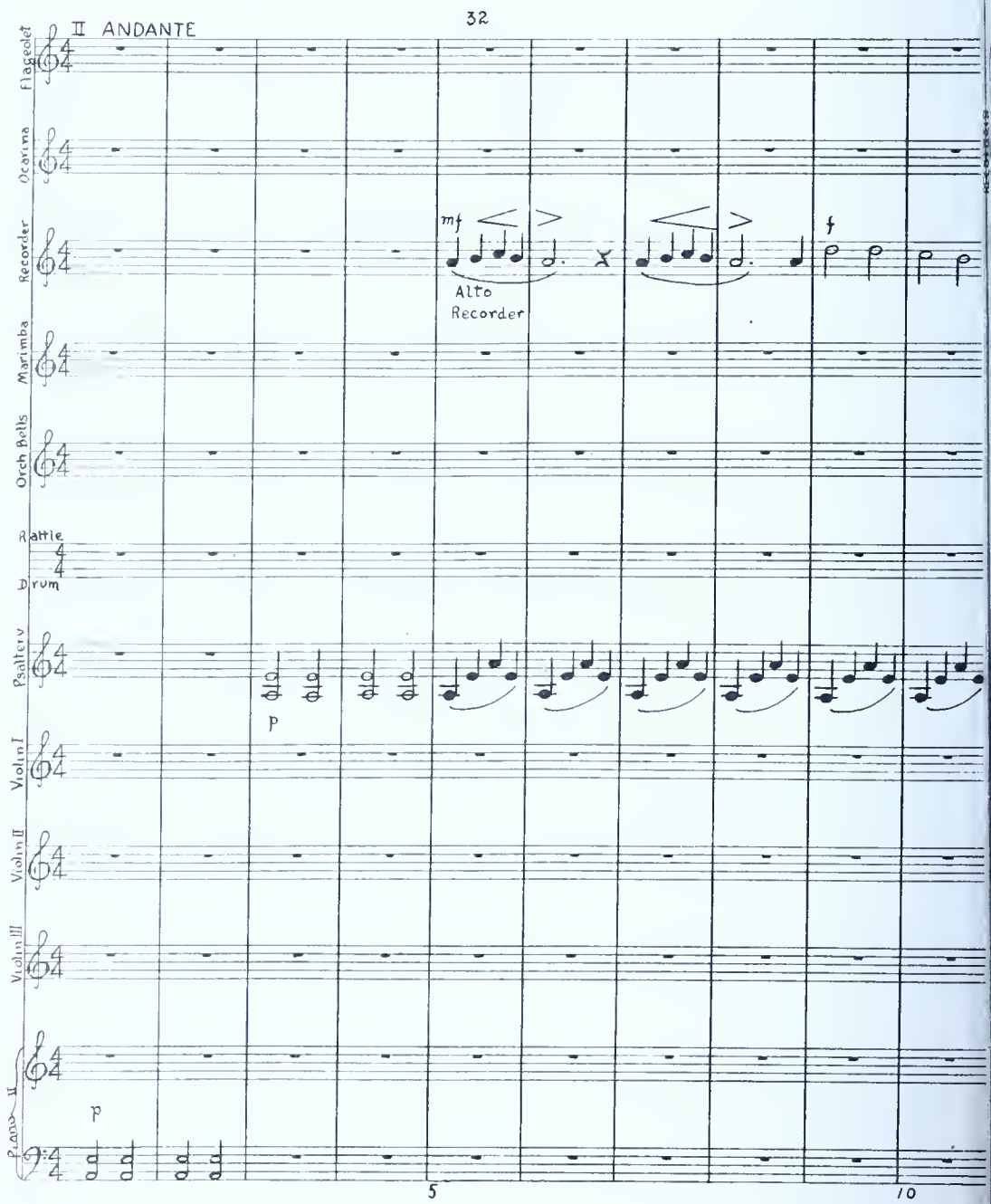

27
Flag.
Ocar.
Mar.
Orch.B.
Psal.
Vio.I
Vio.II
Vio.III
Piano I.
Piano II.
245
250

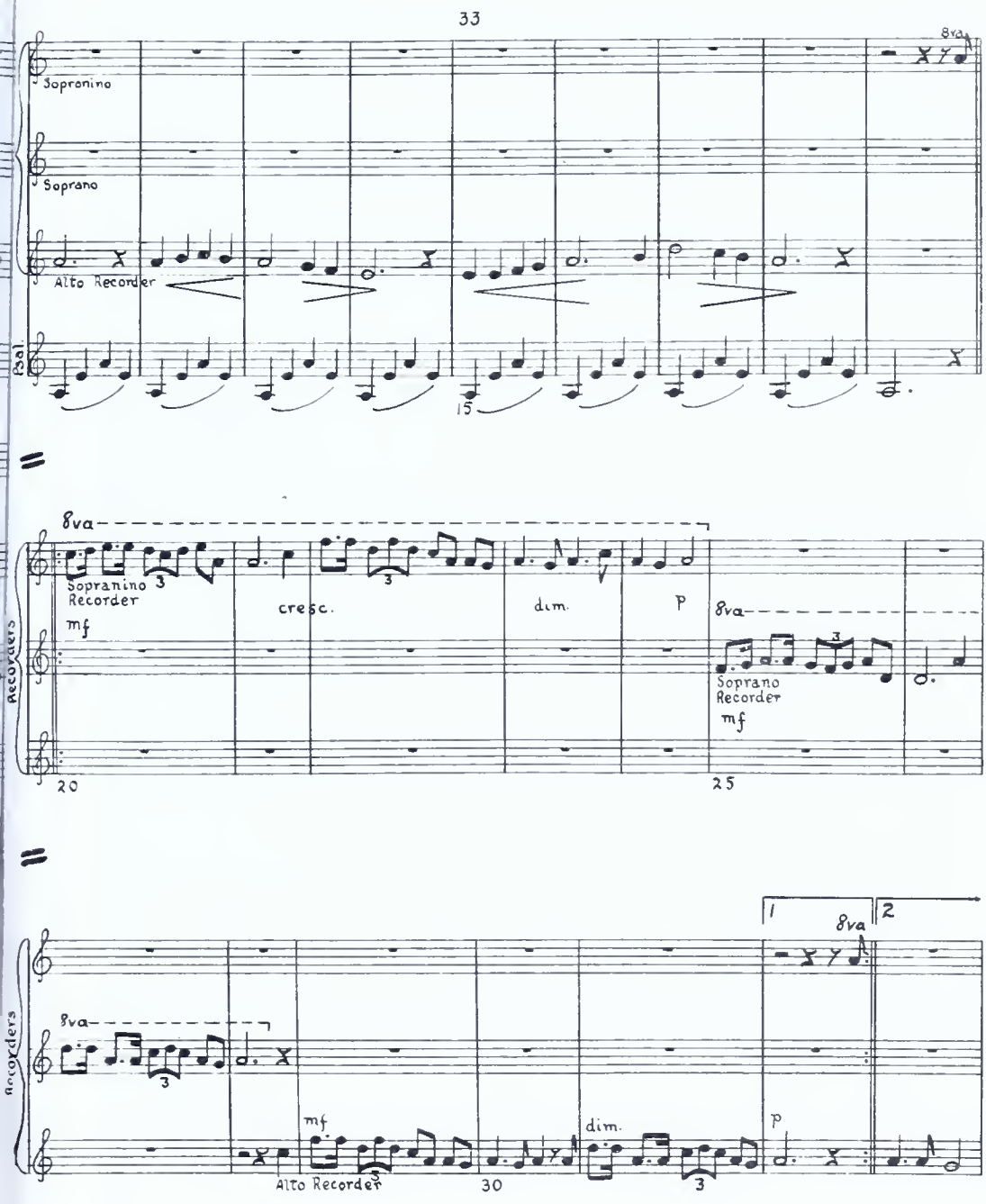

28
Flag
Oxar
Mar
Orch B
Drum
Psal
Vio I
Vio II
Vio III
Piano I
Piano II
f
p
255
260

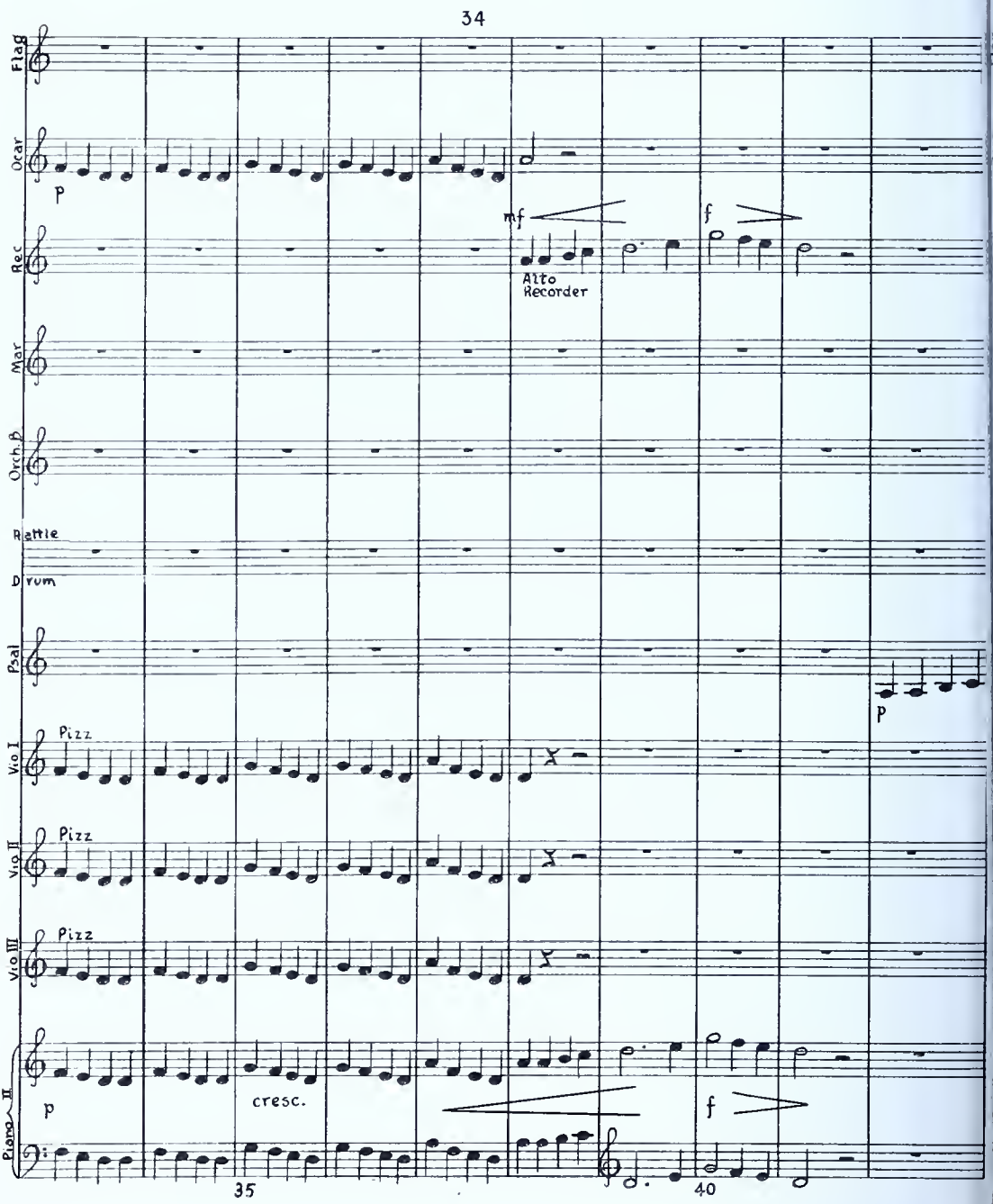

29
Drum
cresc
cresc.
cresc.
265
270

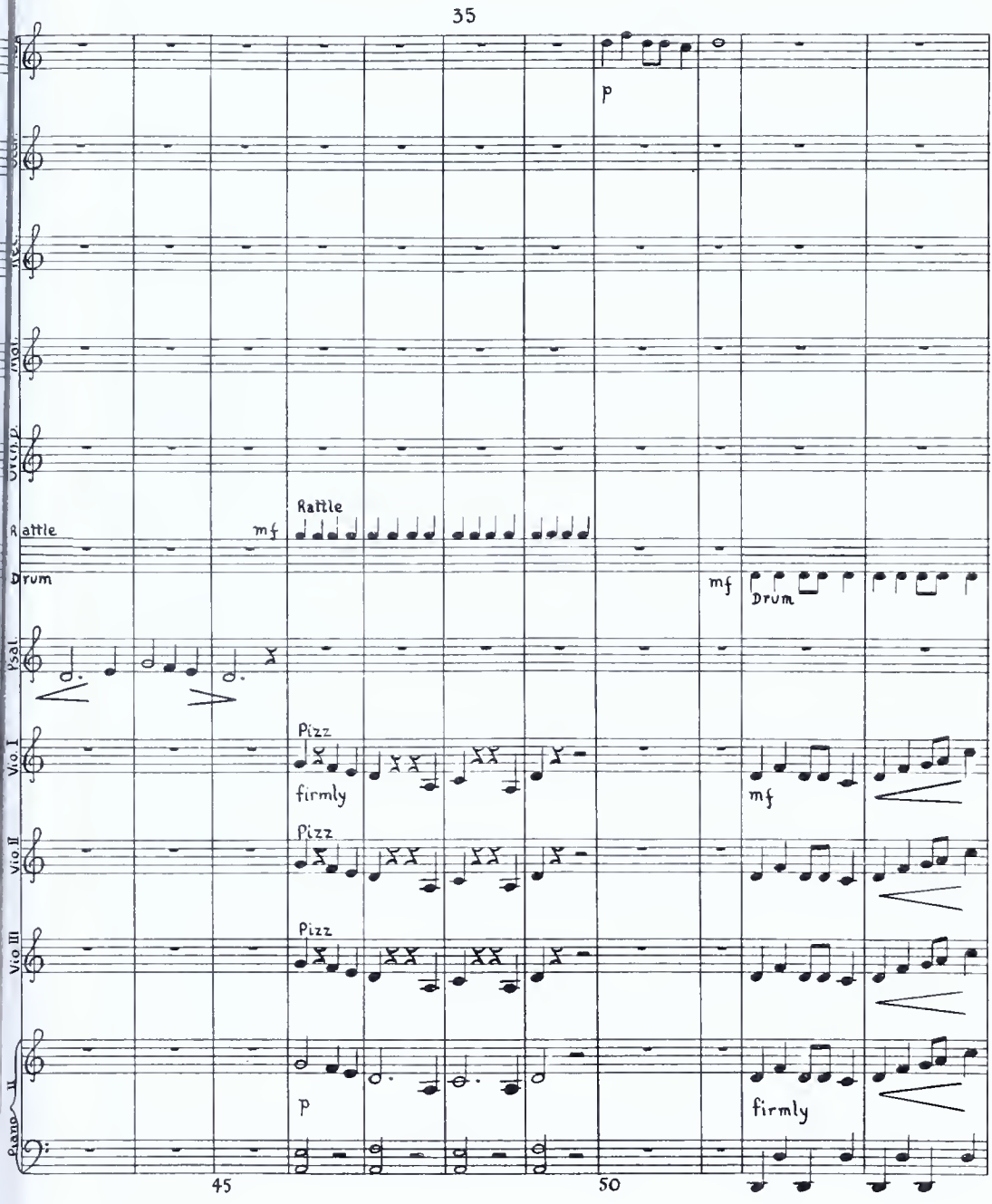

30
Coda
Flag
Oear
Mar.
Bell
Tri.
Bell
A
Orch.B.
Drum
Psal.
Vio I
Vio II
Vio III
8va
Piano I
Piano II
f
mf
3
275

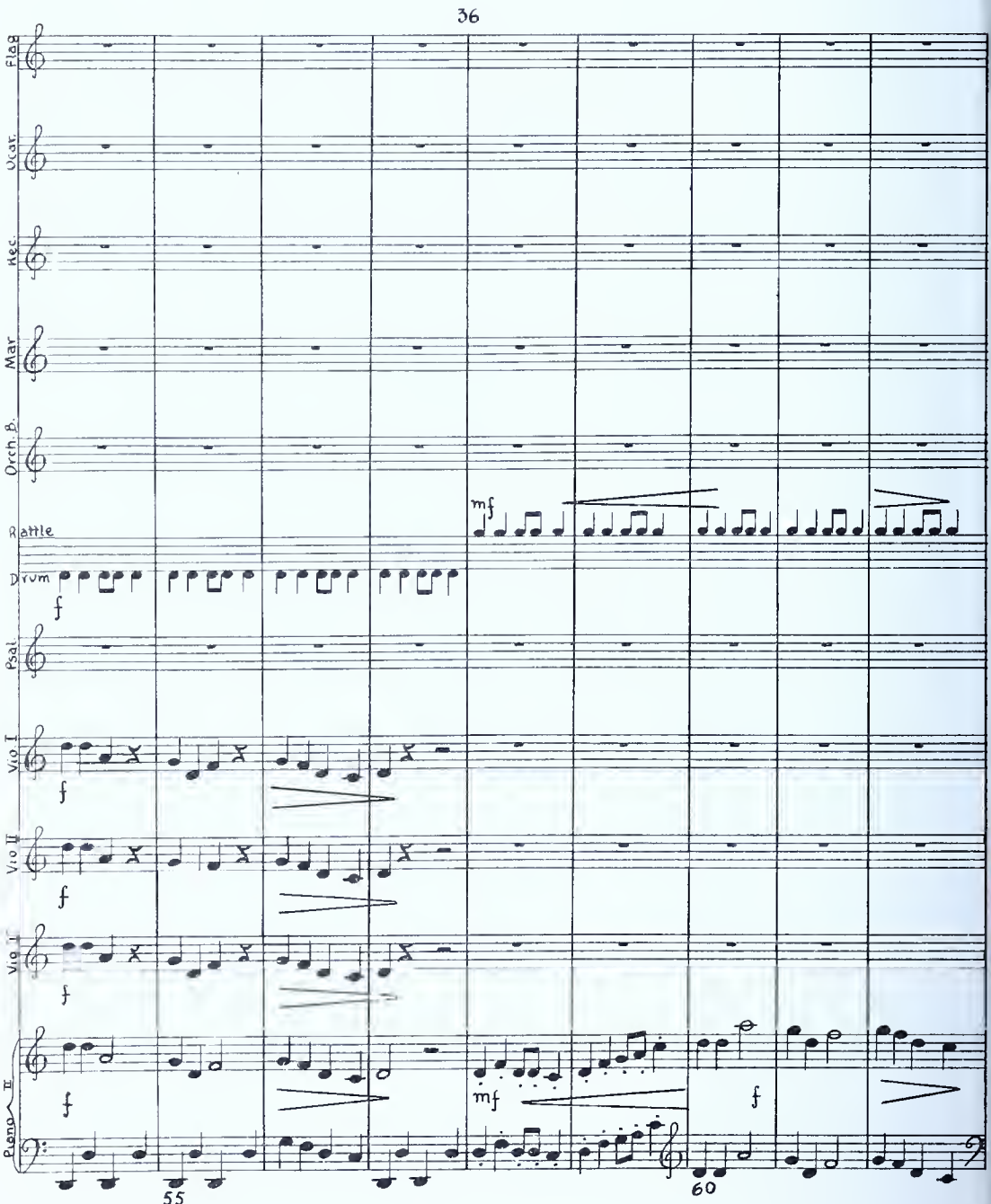

31
Flute
Clar.
Har
F Har
Bl. Dr Bl Dr
Blow Blow Blow
Perc.
Tri.
Bells
Drum
Vln.I
Vln.II
Vln.III
cresc.
ff
8va
Piano I
Piano II
280
285

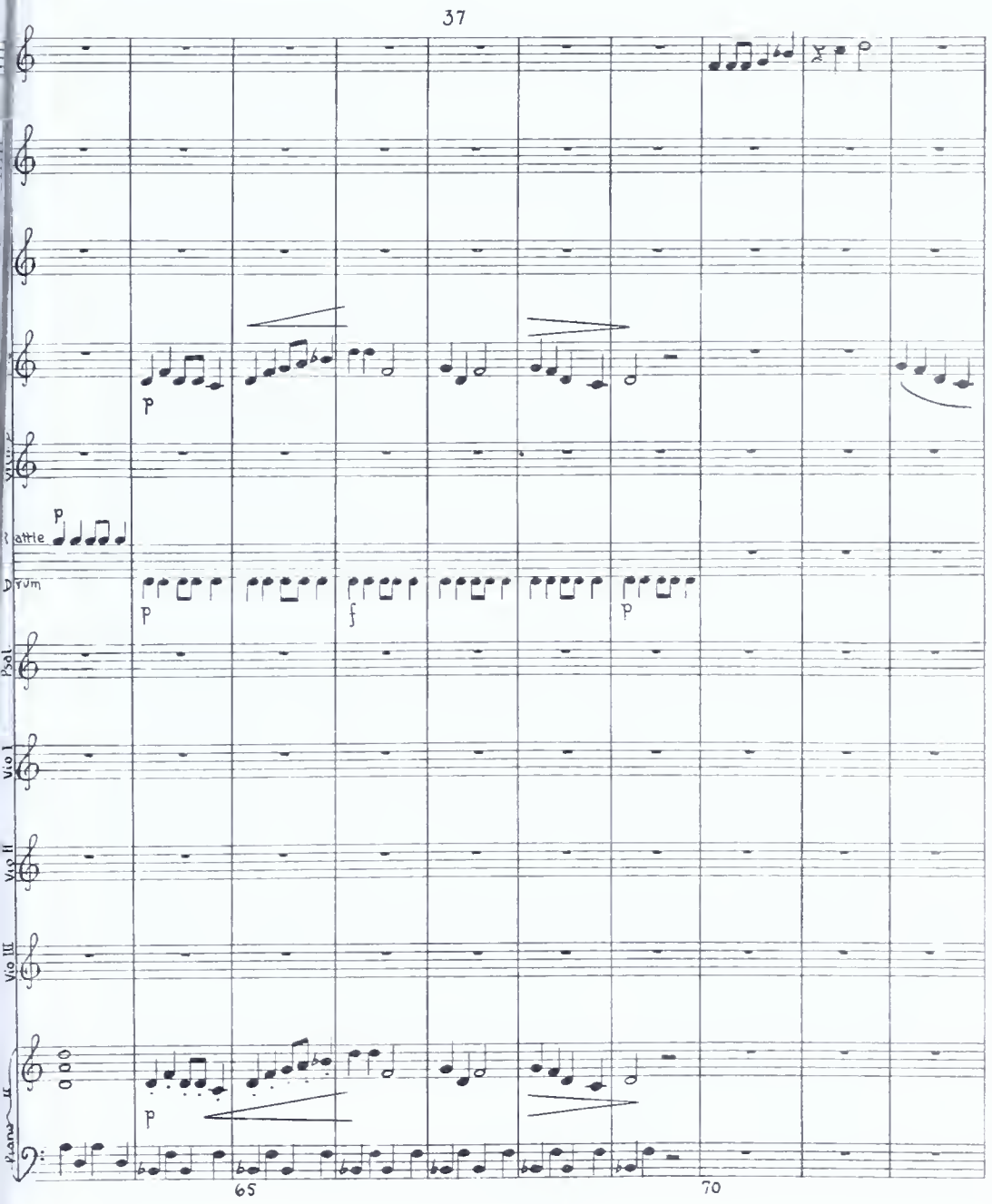

II ANDANTE
32
Flageolet
Ocarina
Recorder
mf
Alto Recorder
f
Marimba
Orch Bells
Rattle
Drum
Psaltery
p
Violin I
Violin II
Violin III
Piano
p
5
10

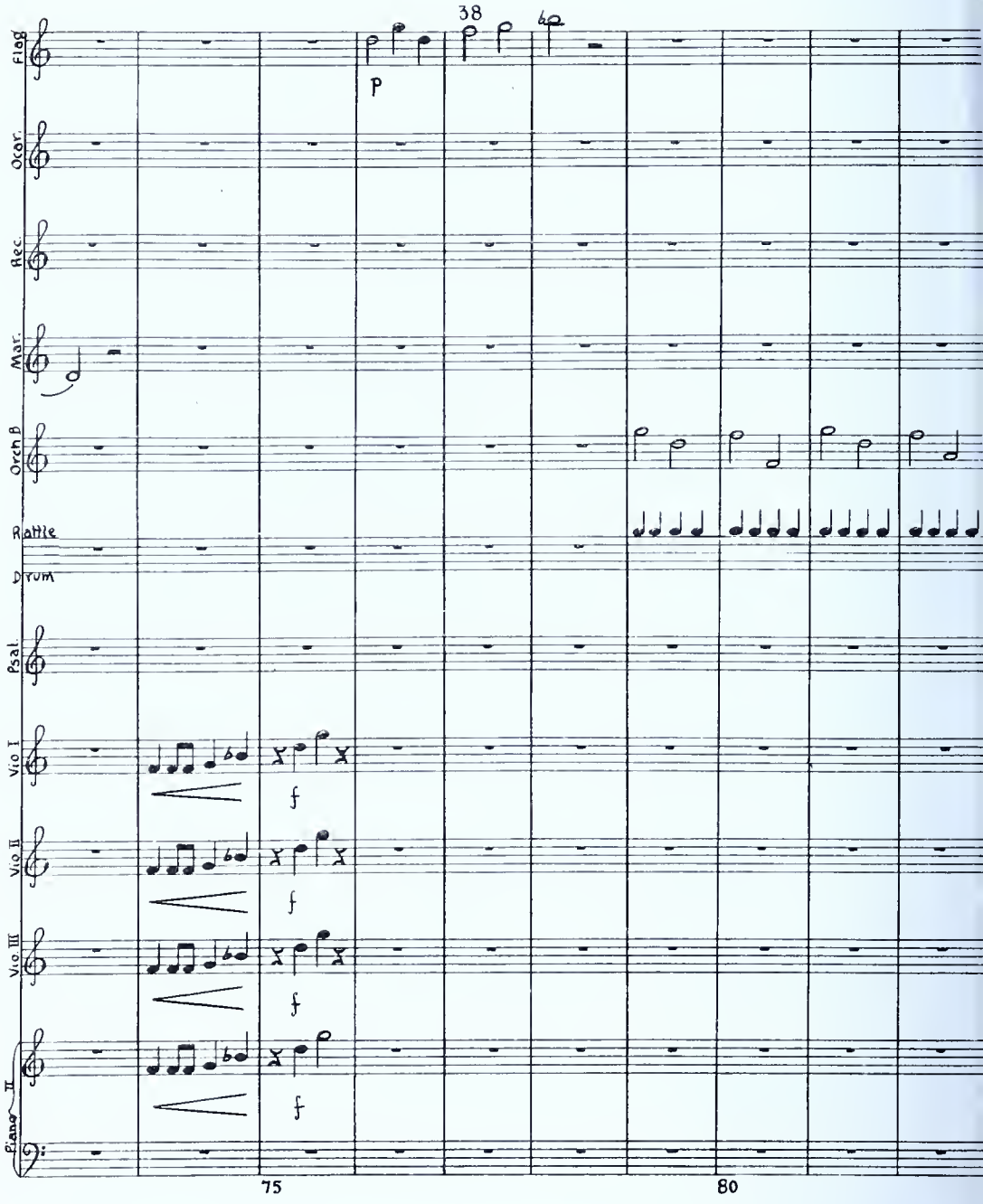

33
8va
Sopranino
Soprano
Alto Recorder
Psal.
15
8va
Sopranino
Recorder
mf
cresc.
dim.
p
8va
Soprano
Recorder
mf
Recorders
20
25
1
8va
2
8va
mf
dim.
p
Alto Recorder
30

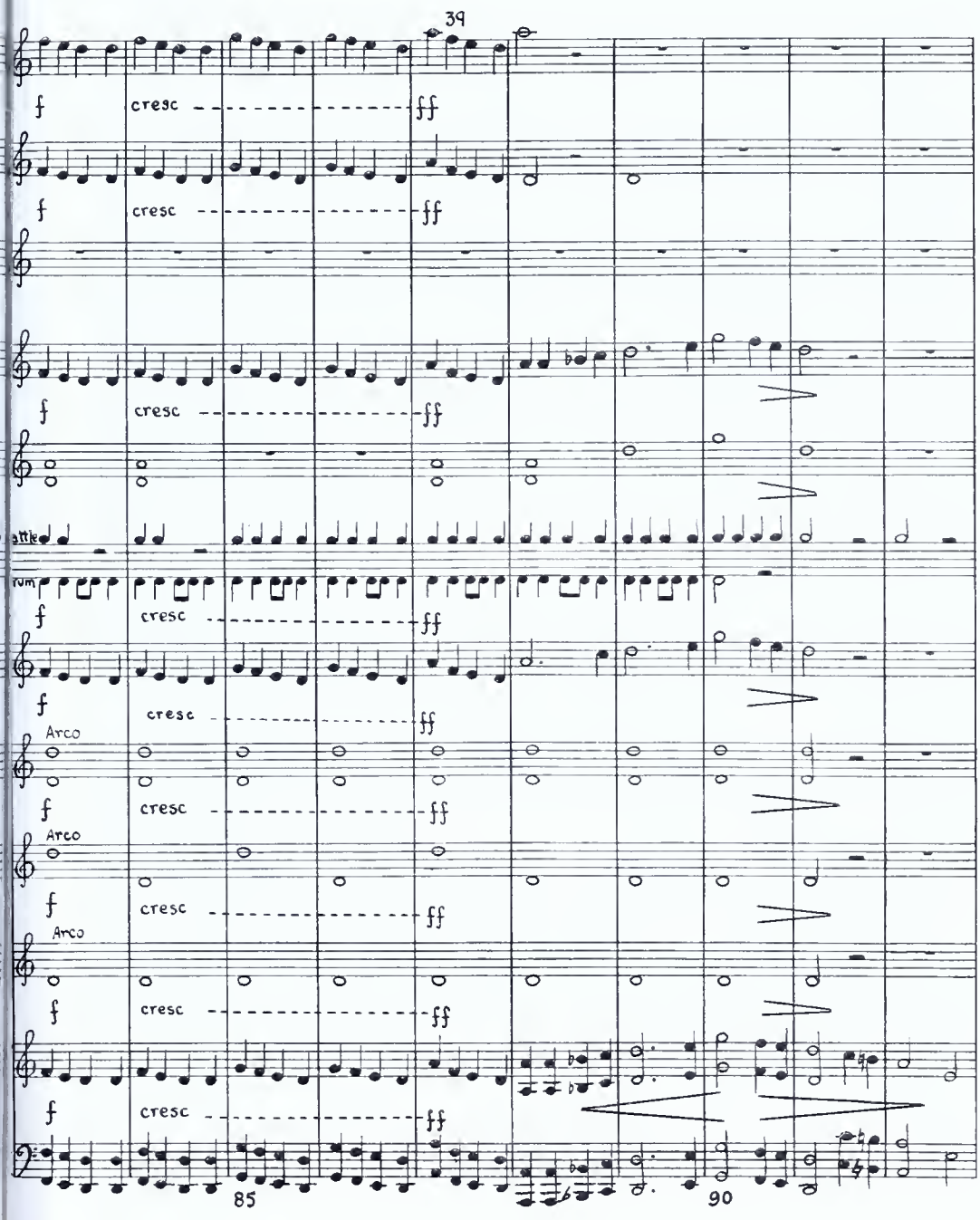

34
Flag
Oear
p
mf
f
Rec
Alto Recorder
Mar
Orch.β
Rattle
Drum
Psal
p
Vio I
Pizz
Vio II
Pizz
Vio III
Pizz
Piano II
p
cresc.
f
35
40

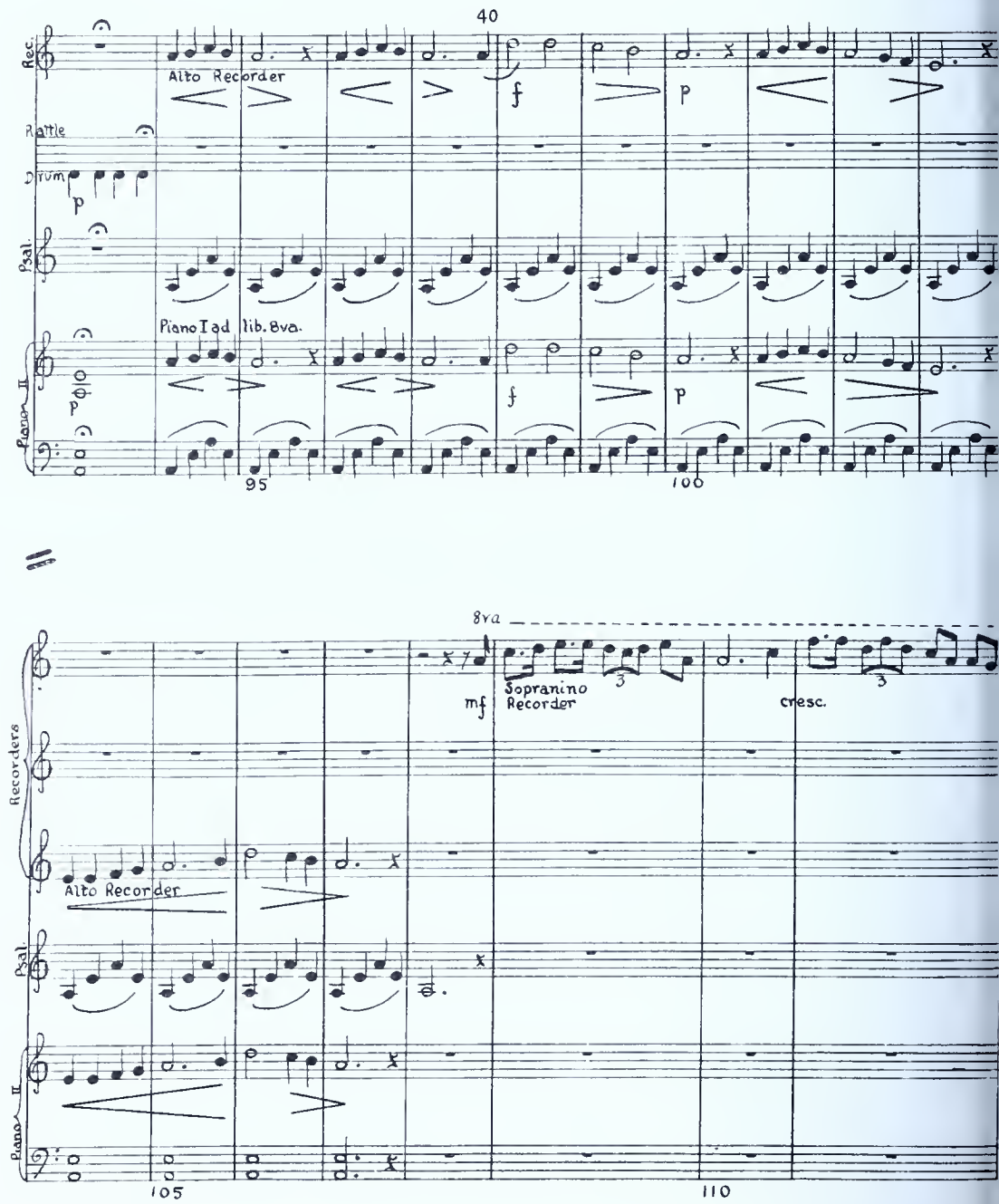

35
p
Rattle
mf
Rattle
Drum
mf
Drum
Psal.
Vio. I
Pizz
firmly
mf
Vio. II
Pizz
Vio. III
Pizz
Piano II
p
firmly
45
50

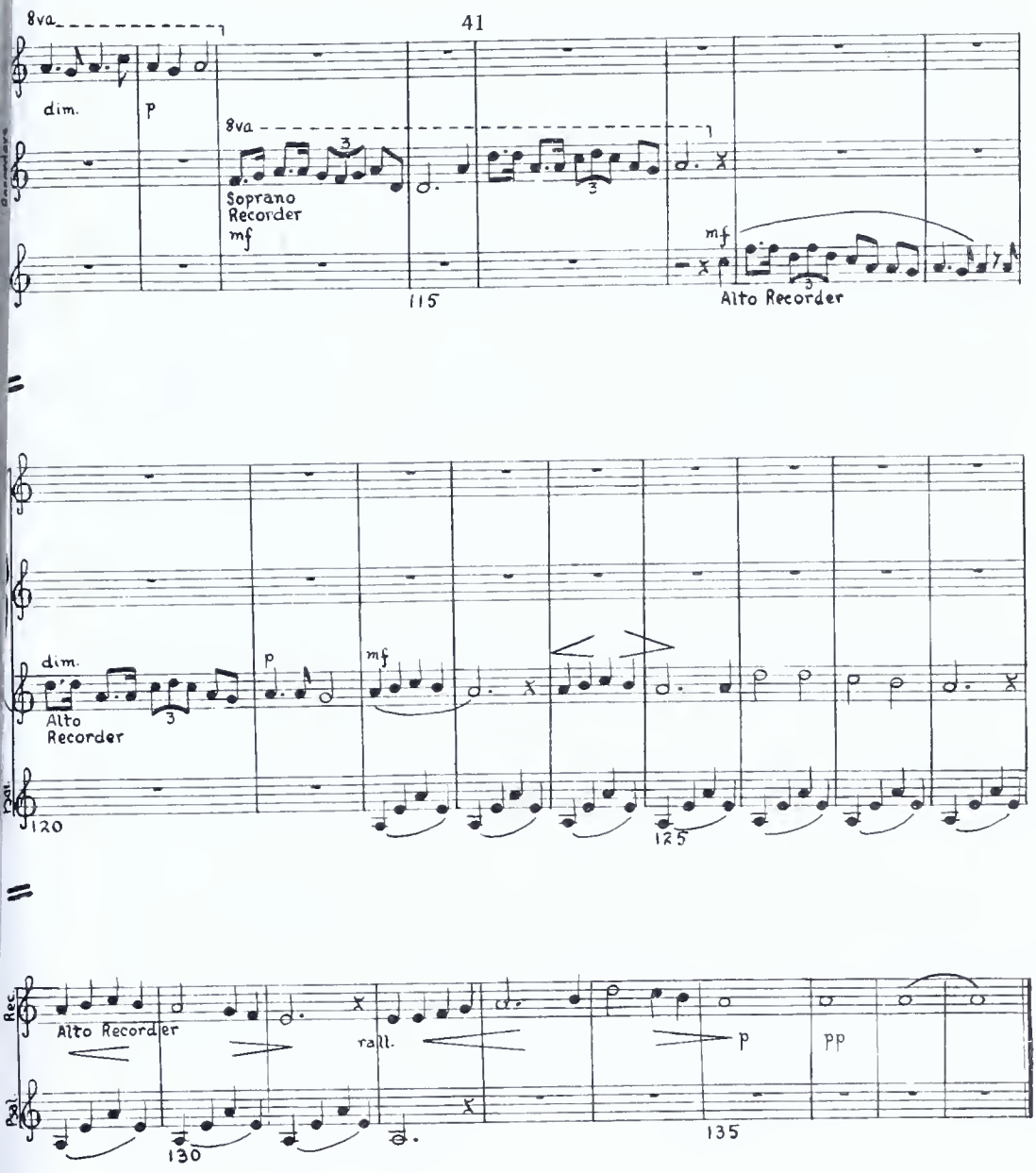

36
Flag
Ocar.
Rec.
Mar
Orch. B.
Rattle
Drum
Psal.
Vio I
Vio II
Vio I
Piano
mf
f
mf
f
55
60

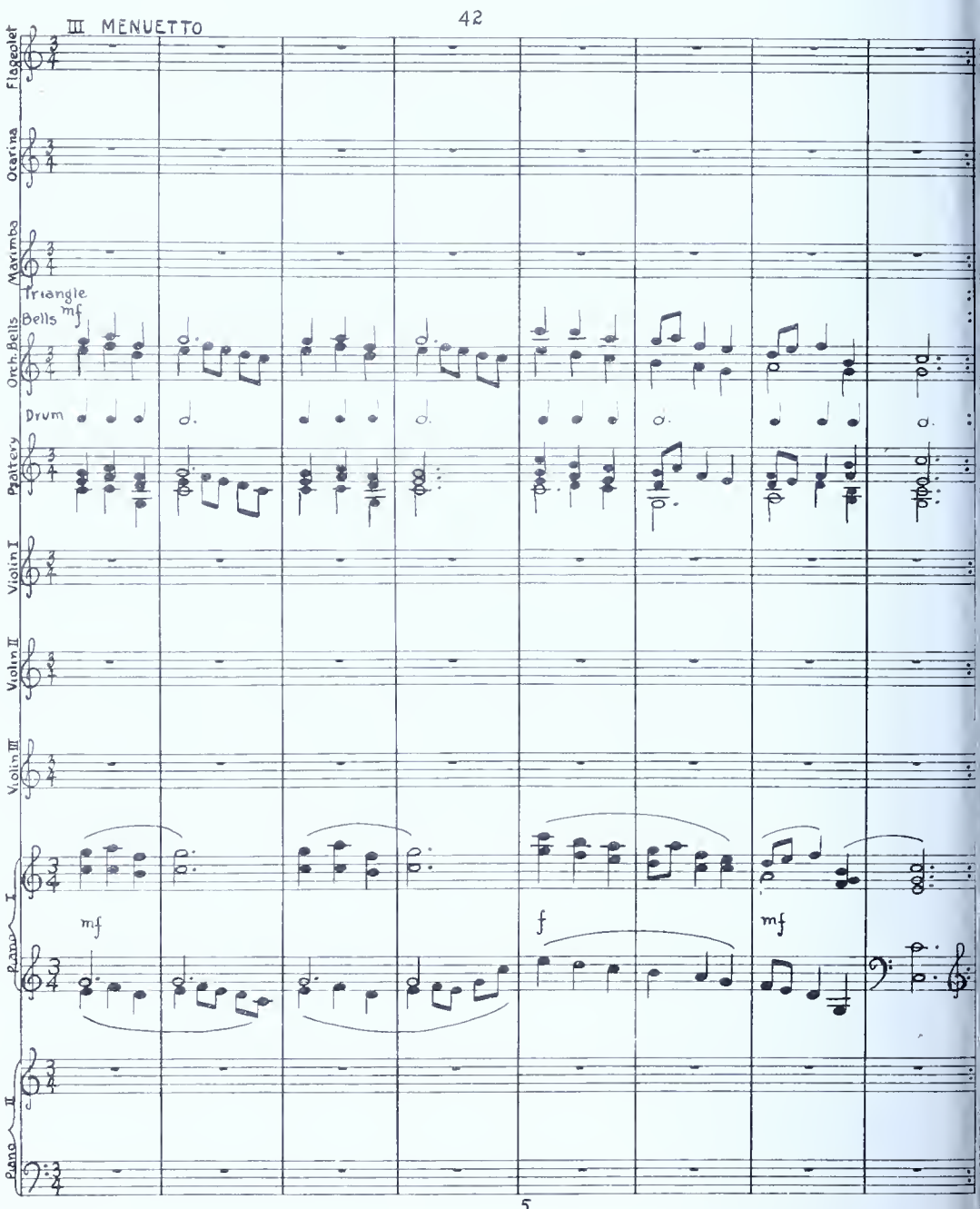

37
Rattle
Drum
Vio I
Vio II
Vio III
Piano
65
70

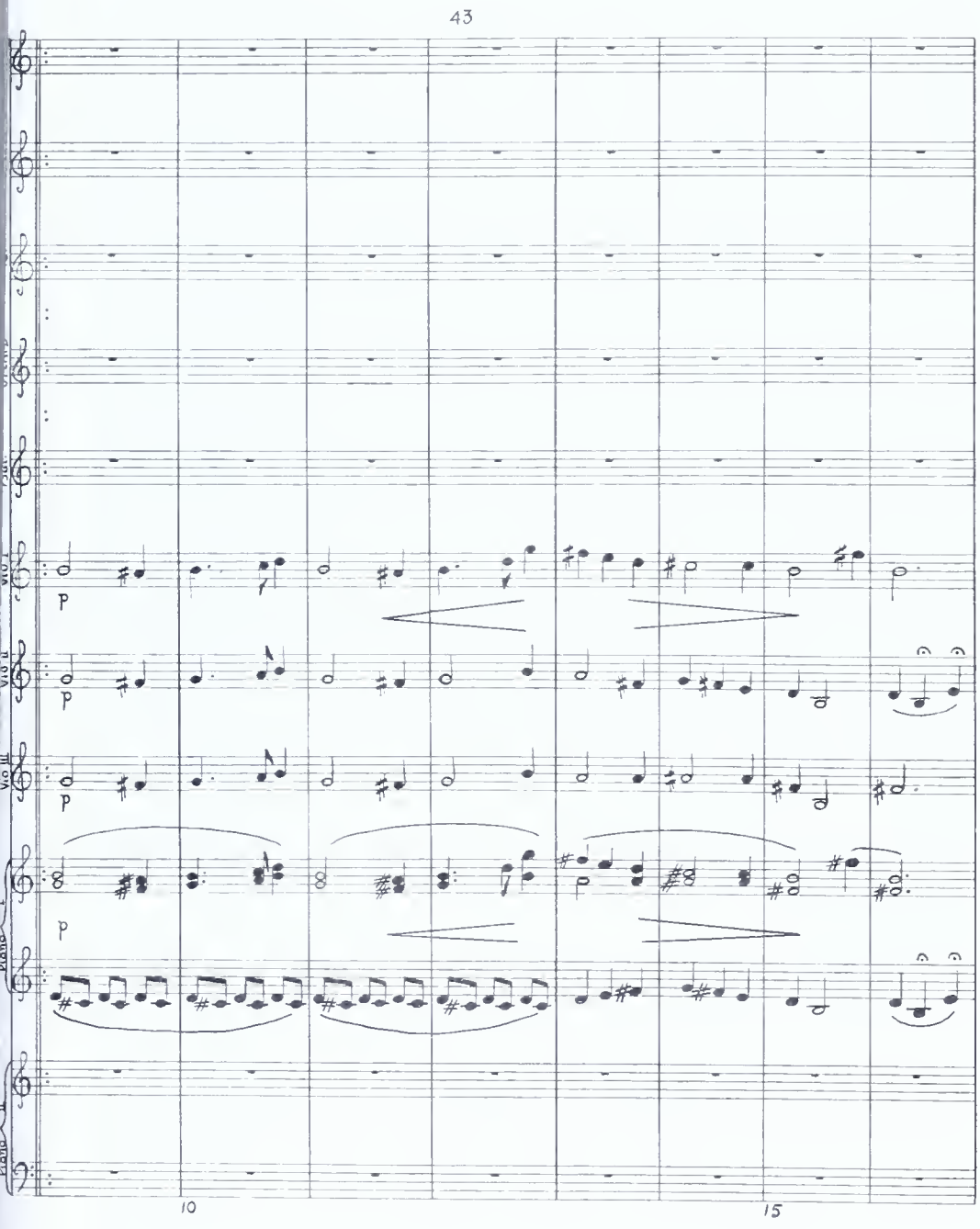

38
Flag
Ocar.
Rec.
Mar.
Orch B
Rattle
Drum
Psal.
Vio I
Vio II
Vio III
Piano II
p
f
f
f
f
75
80


39
f
cresc
ff
Arco
85
90


40
Rec.
Alto Recorder
f
p
Rattle
Drum
p
Psal.
Piano I ad lib. 8va.
Piano II
p
f
p
95
100
8va
Recorders
mf
Sopranino Recorder
cresc.
Alto Recorder
Psal.
Piano II
105
110


41
8va
dim.
p
8va
Soprano Recorder
mf
115
mf
Alto Recorder
dim.
Alto Recorder
p
mf
120
125
Alto Recorder
rall.
p
pp
130
135


III MENUETTO
42
Flageolet
Ocarina
Marimba
Triangle
Bells
mf
Orch. Bells
Drum
Psaltery
Violin I
Violin II
Violin III
Piano I
mf
f
mf
Piano II
5


43
Vio I
Vio II
Vio III
Piano I
Piano II
p
p
p
p
10
15

44

Flag

Ocar.

Mar

Orch. B

Psal.

Vio I

Vio II

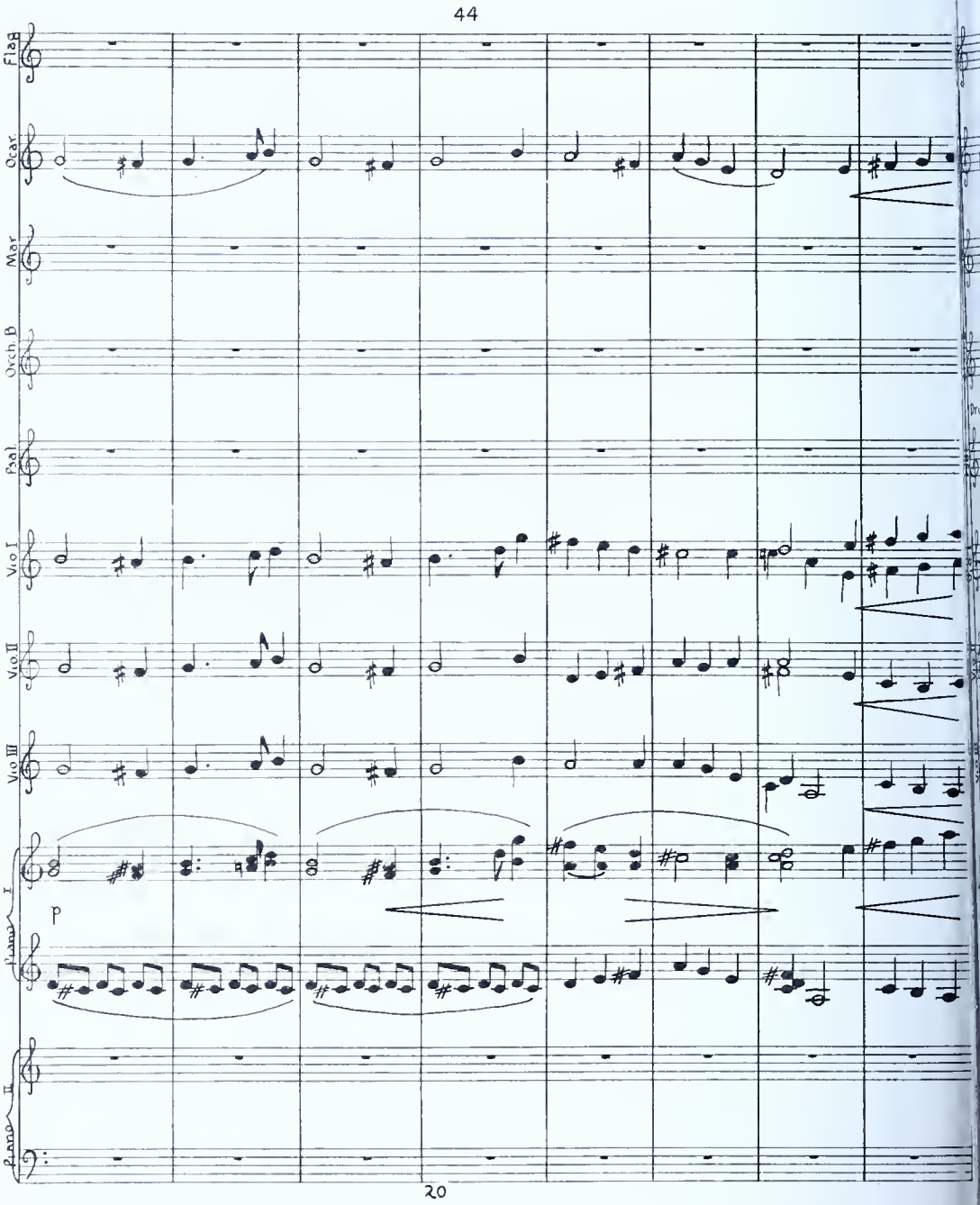
Vio III

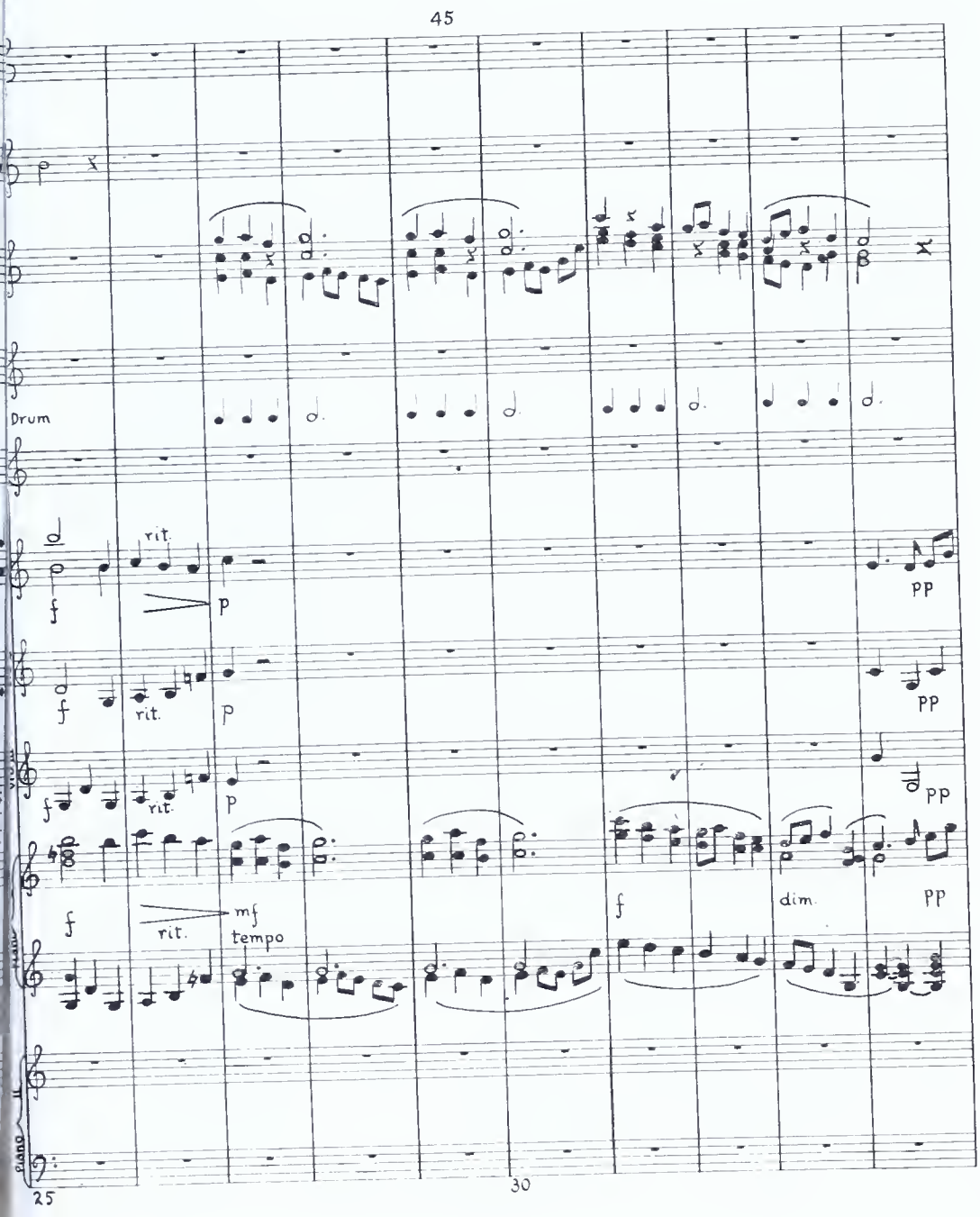
Piano I

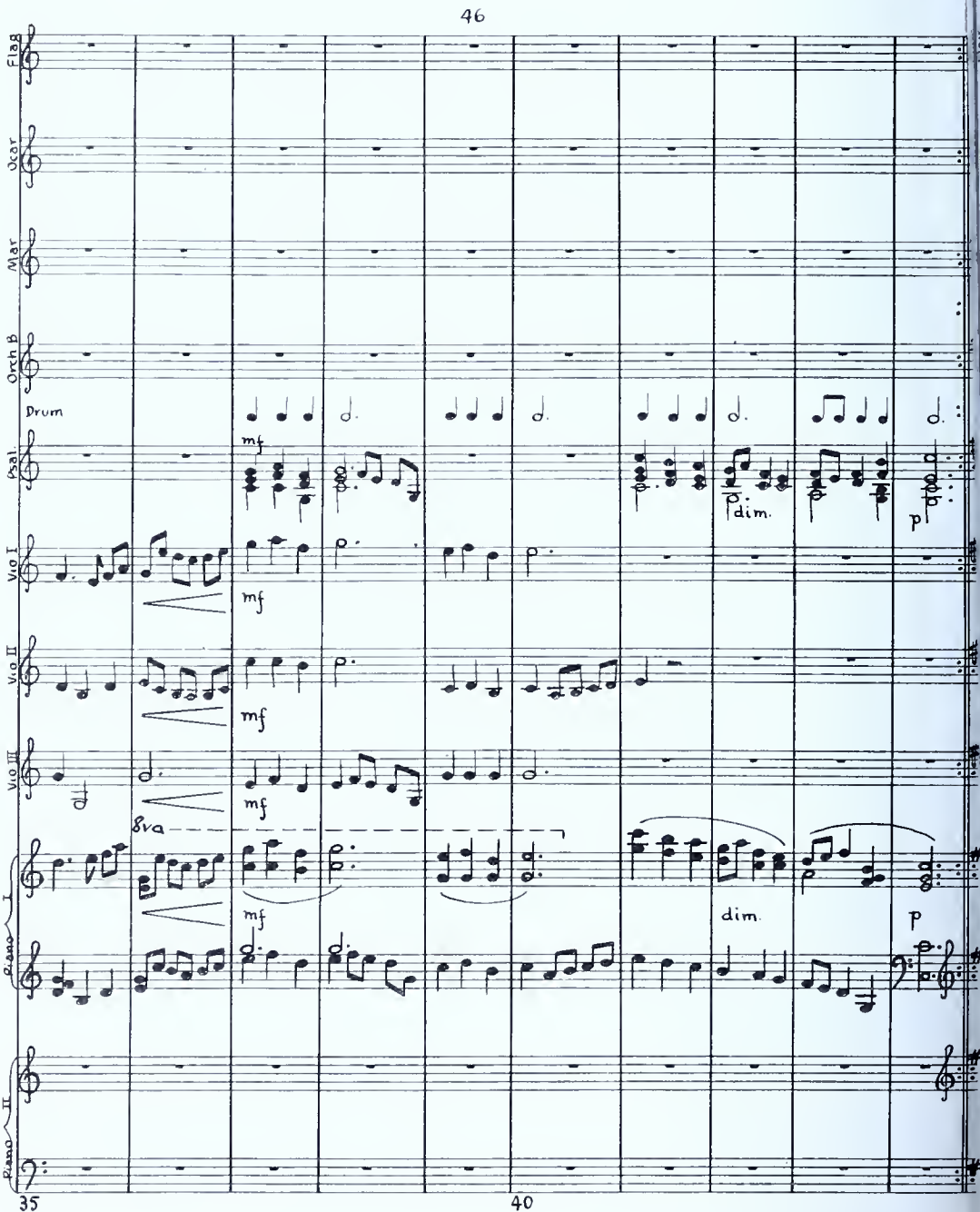
p

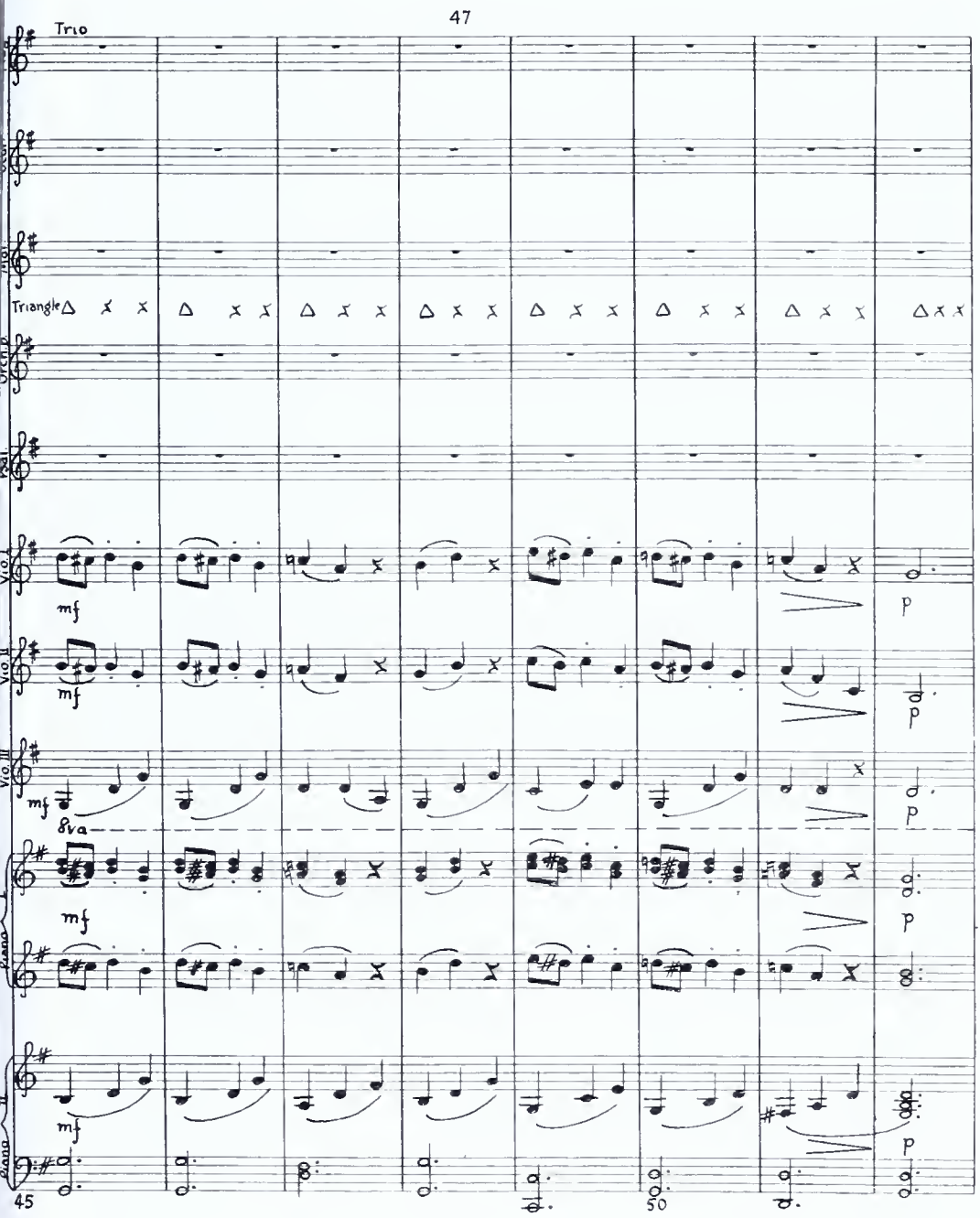
Piano II

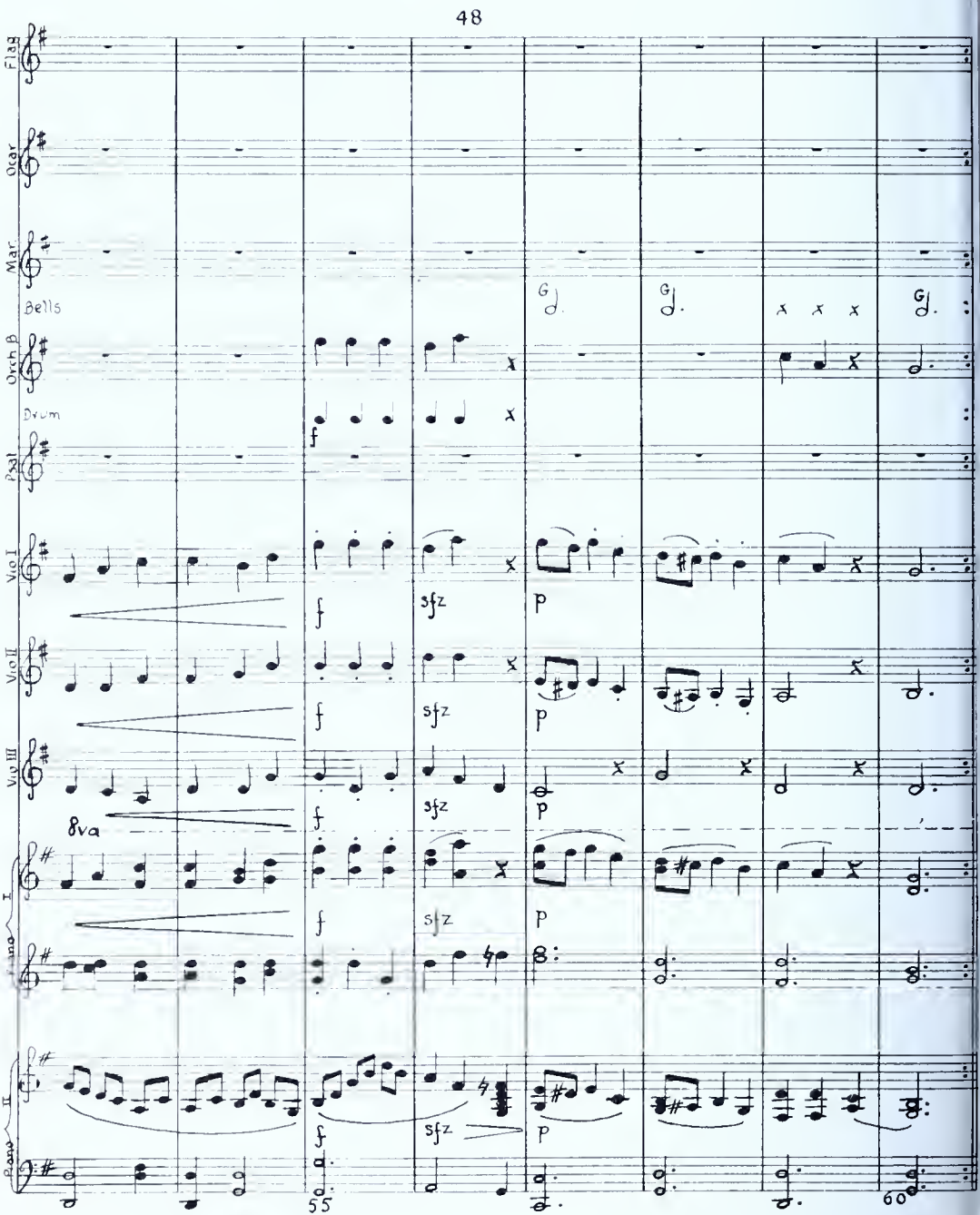
20

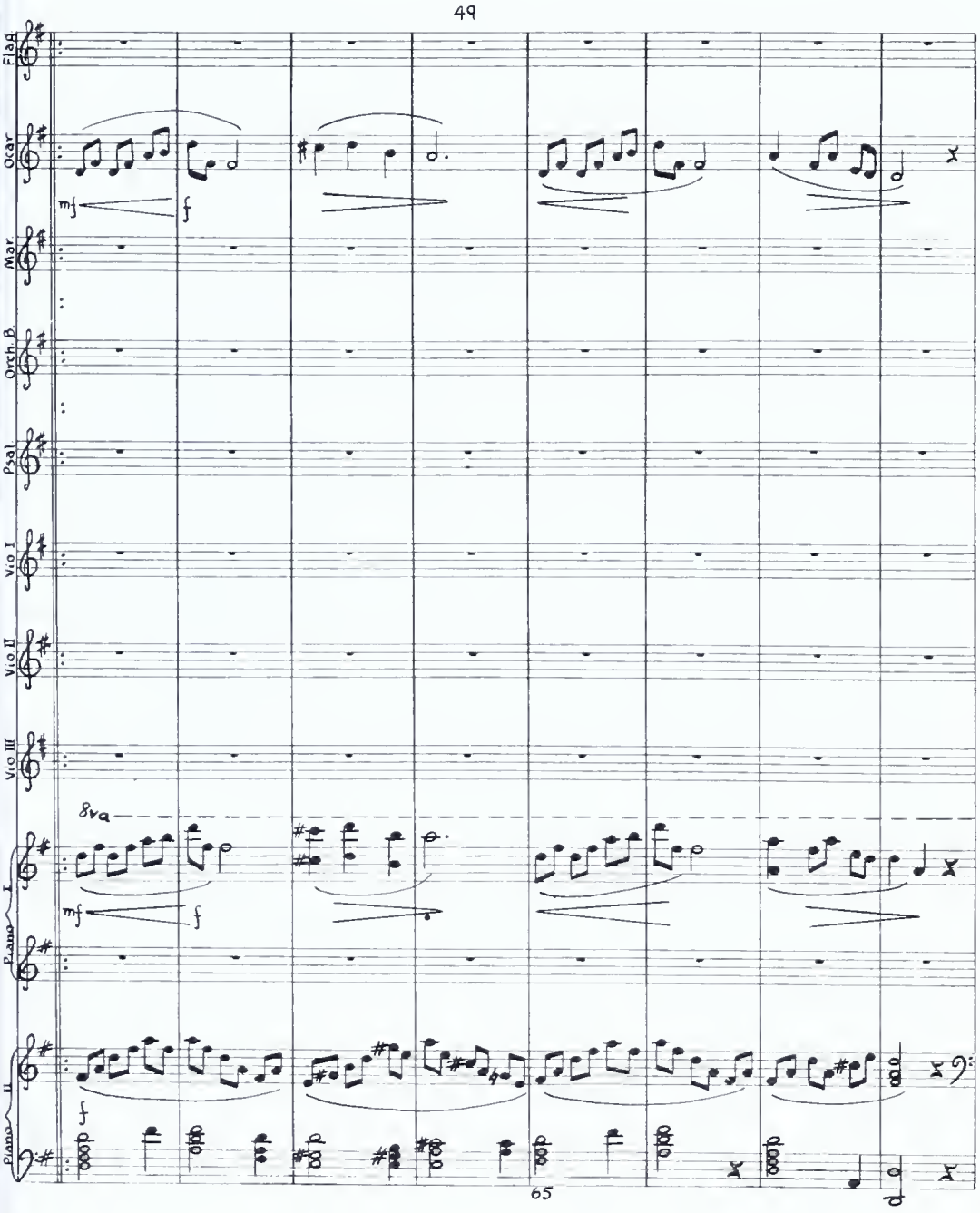


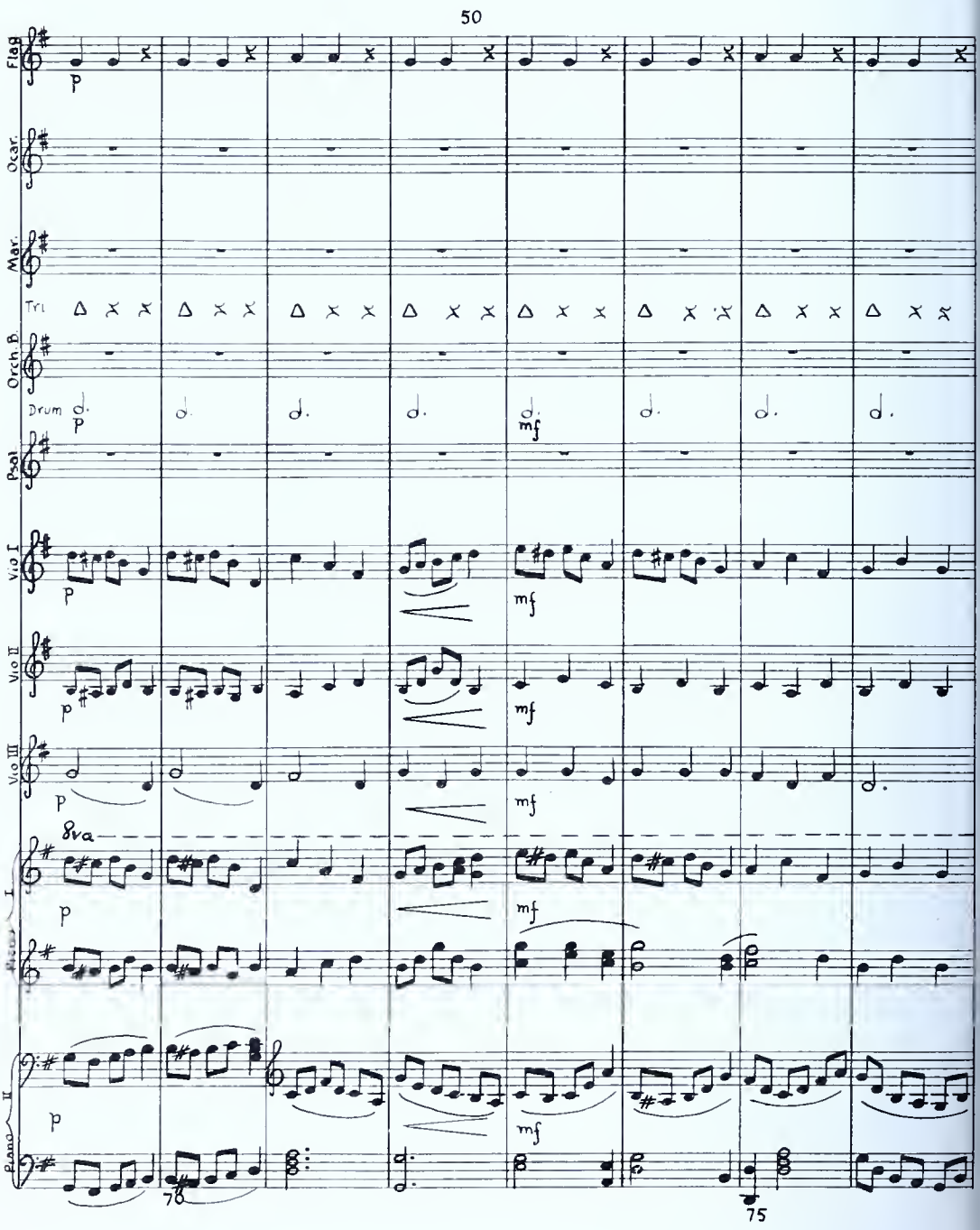

45
Drum
rit.
p
pp
rit.
mf
tempo
dim.
Piano
25
30

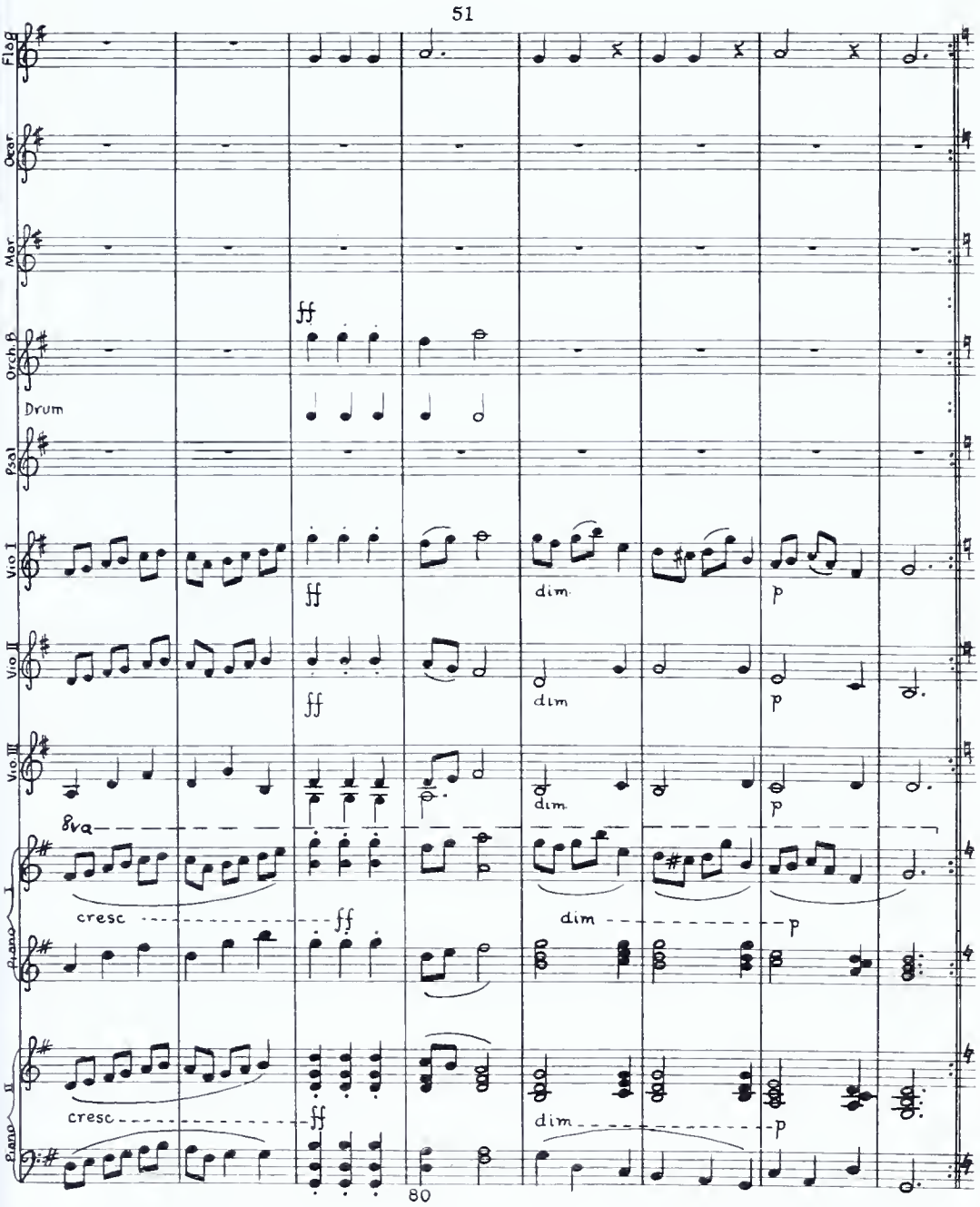

46
Flag
Ocar
Mar
Orch B
Drum
mf
Psal
dim.
p
Vio I
mf
Vio II
mf
Vio III
mf
8va
mf
dim.
p
Piano I
Piano II
35
40

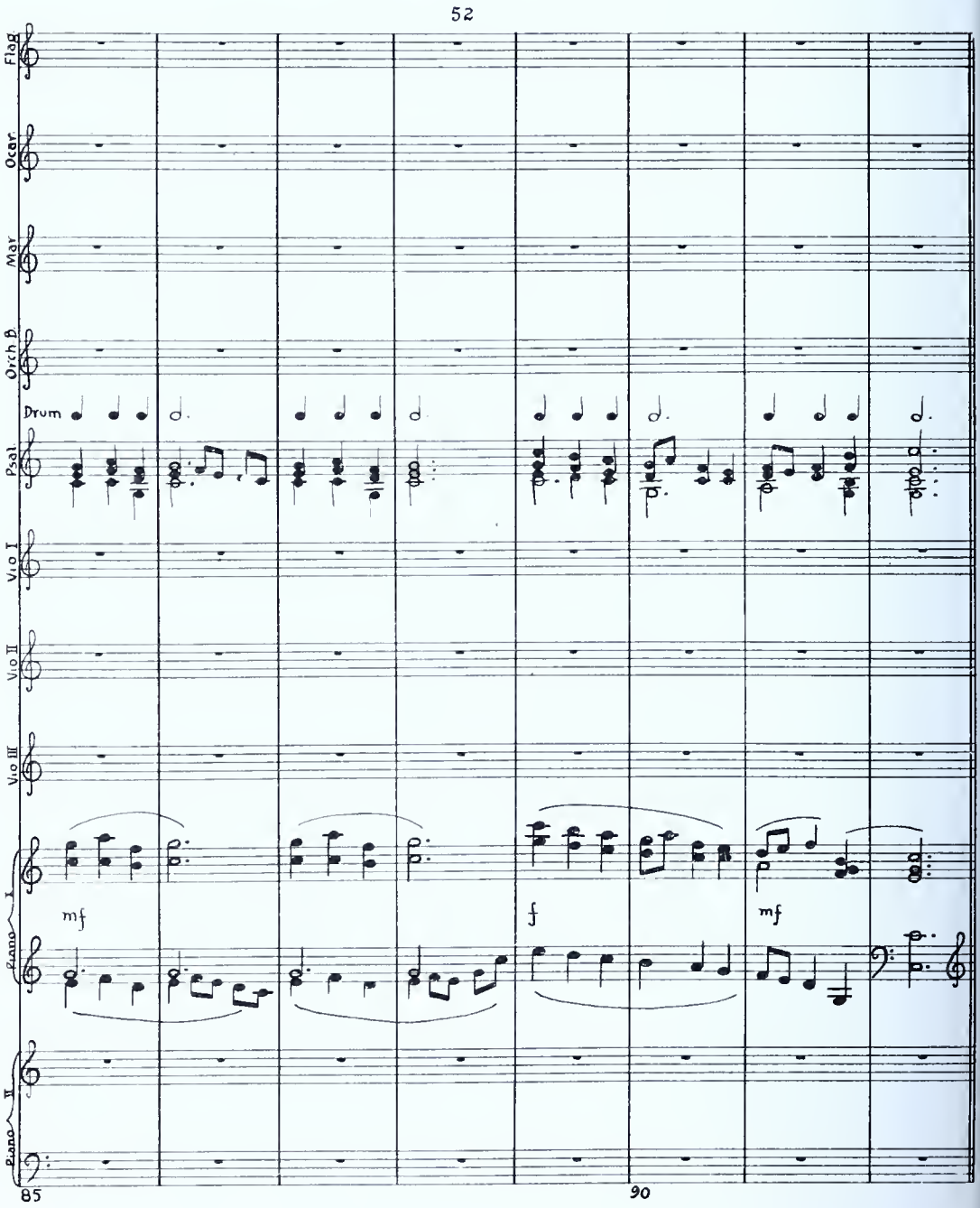

47
Trio
Triangle
Vio. I
Vio. II
Vio. III
8va
Piano I
Piano II
mf
p
45
50

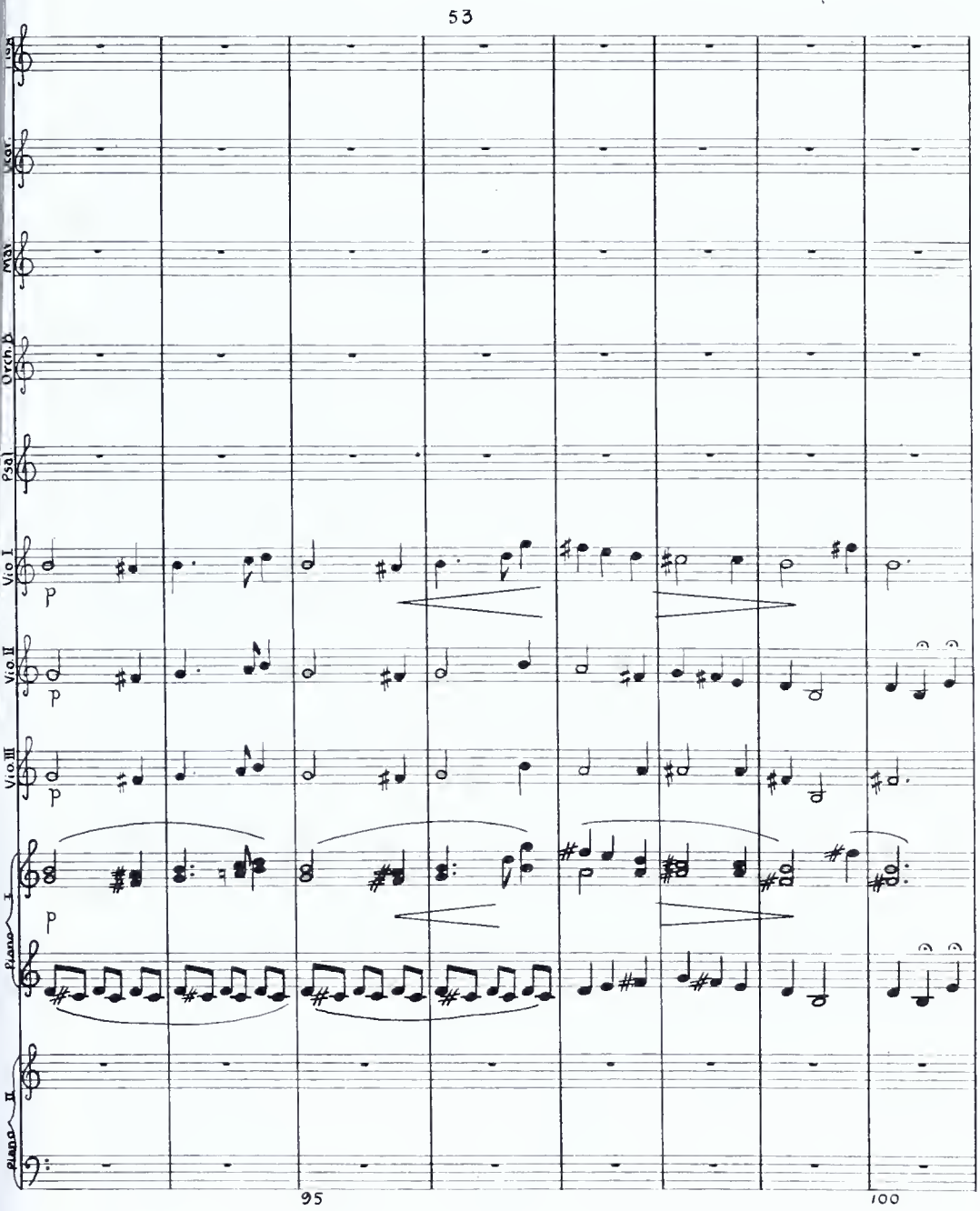

48
Flag
Oar
Mar
Bells
Orch B
Drum
Pedl
Vio I
Vio II
Vio III
8va
Piano I
Piano II
f
sfz
p
55
60

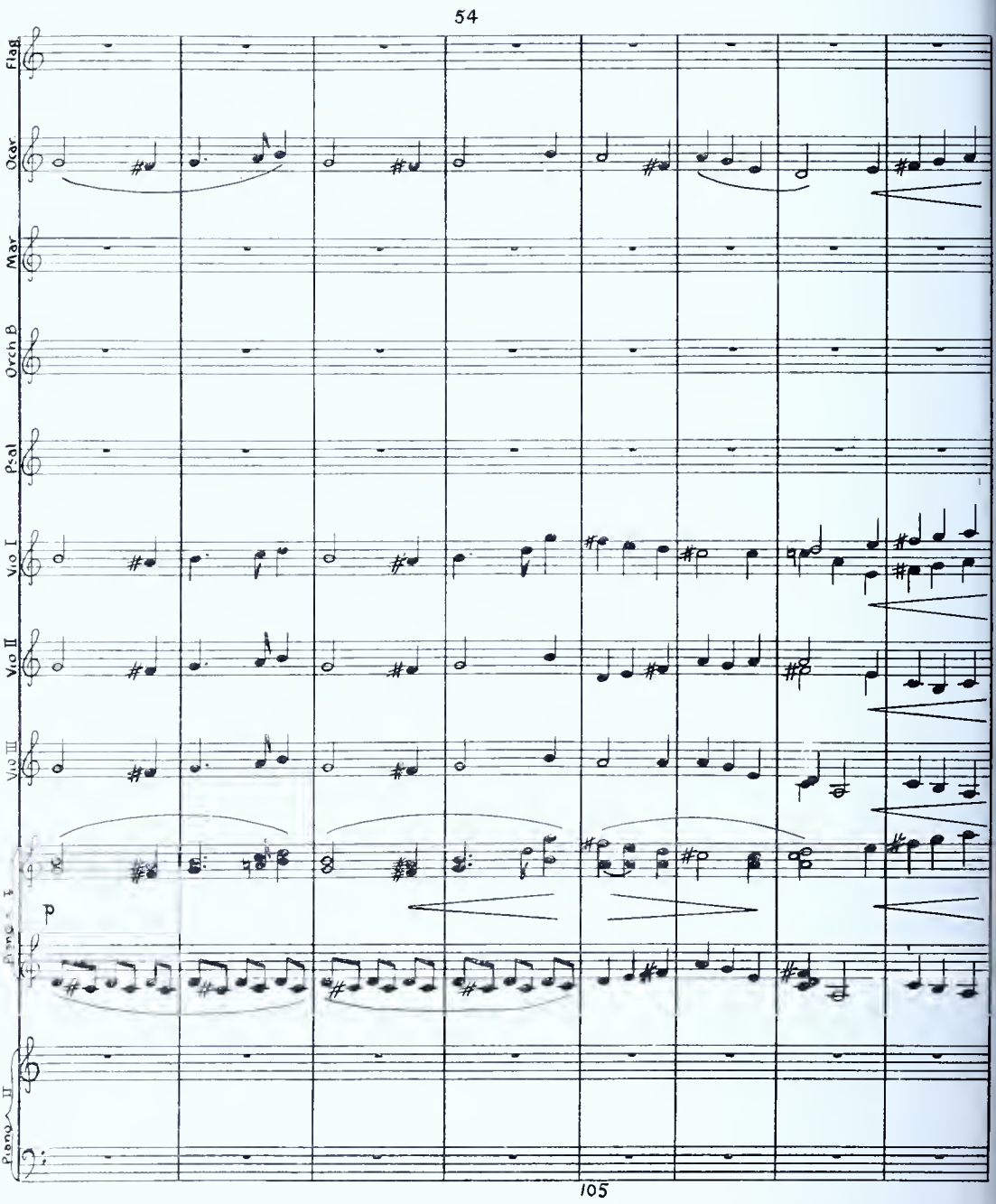

49
Flag
Oboe
Mar.
Orch. B.
Psal.
Vio I
Vio II
Vio III
8va
mf
f
Piano I
Piano II
65

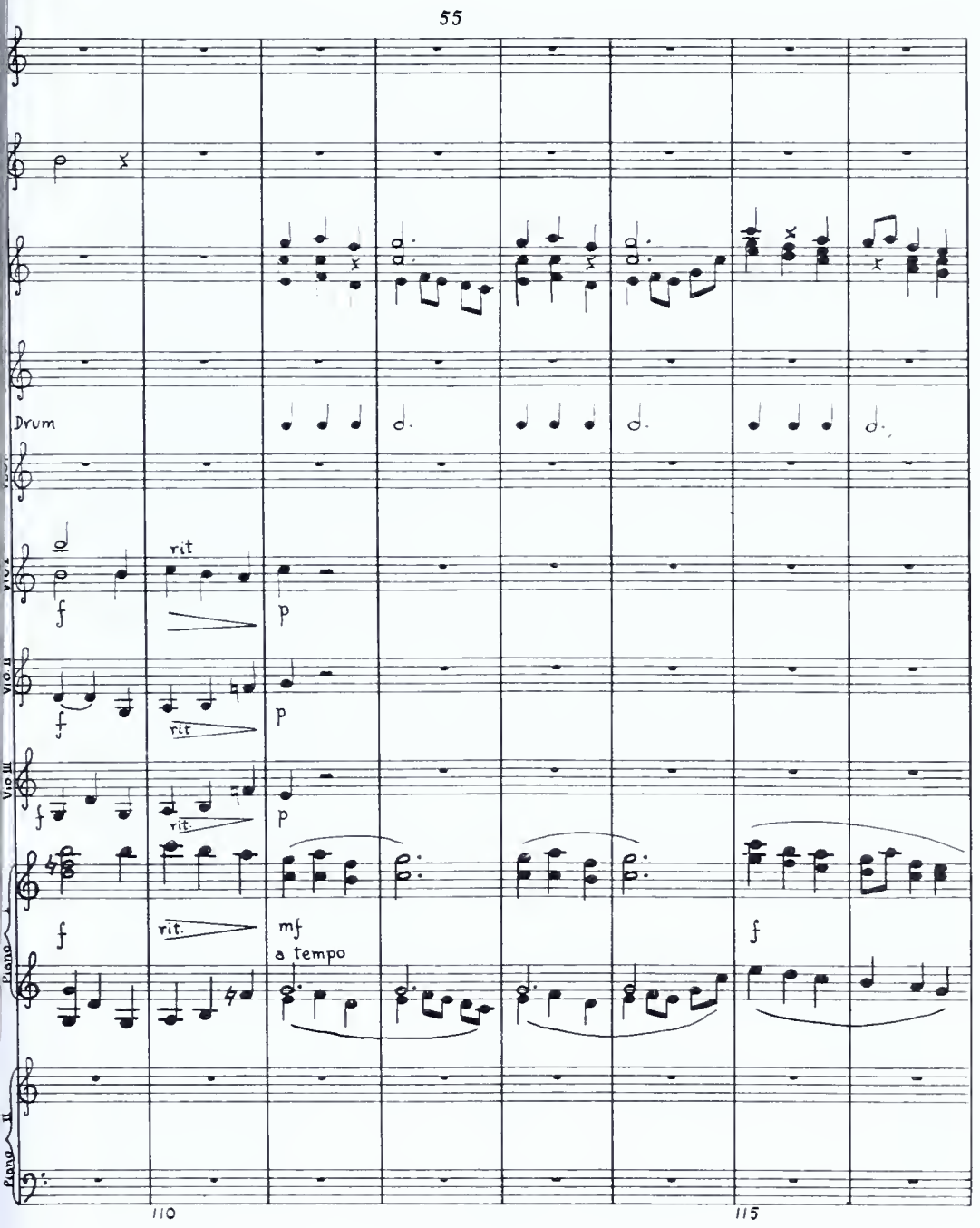

50
Flag
Oca.
Mar.
Tri
Orch.B
Drum
Psal
Vio I
Vio II
Vio III
Piano I
Piano II
p
mf
8va
78
75

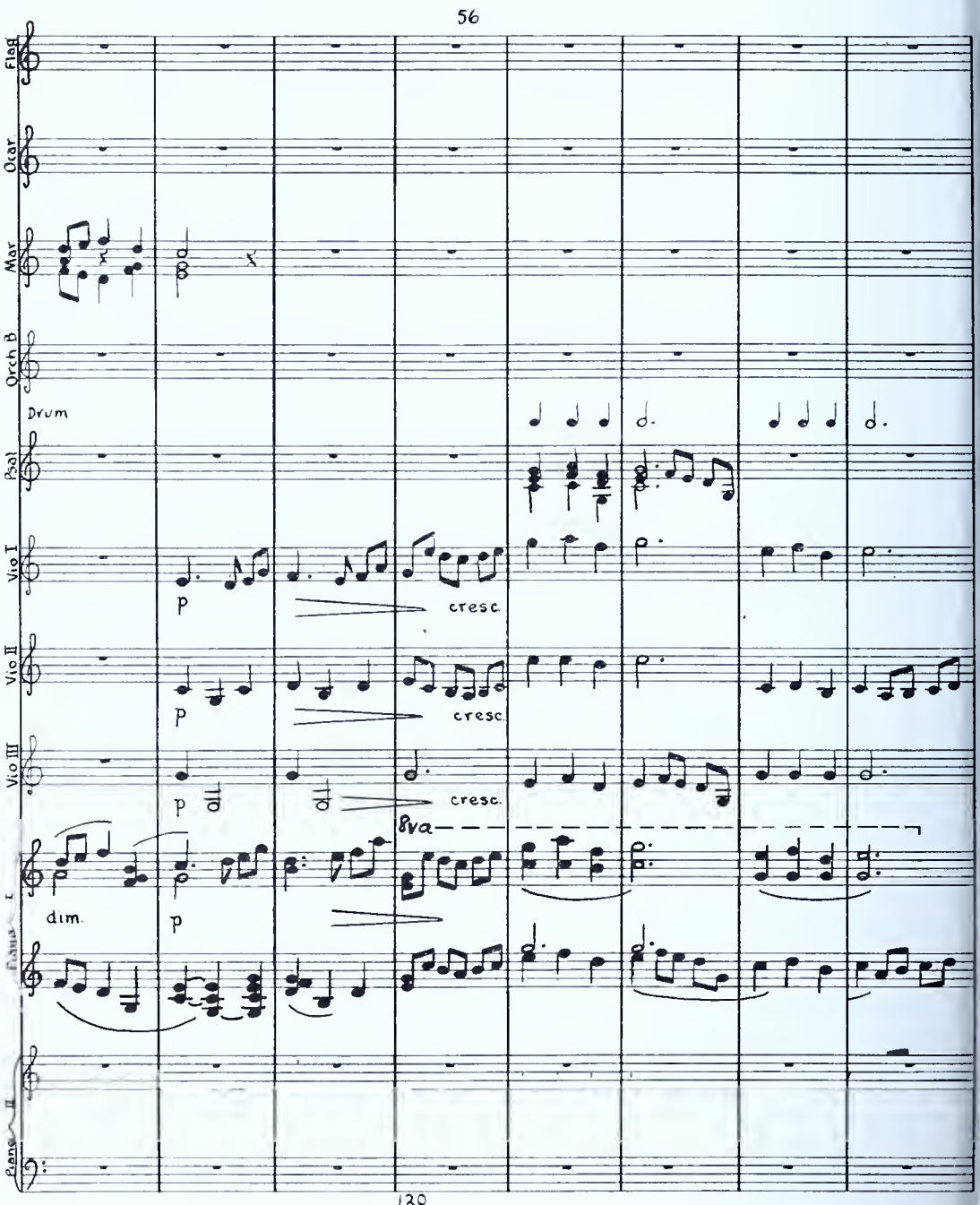

51
Flag
Oear
Mar
Orch B
Drum
Psal
Vio I
Vio II
Vio III
8va
cresc
ff
dim
p
Piano I
Piano II
80

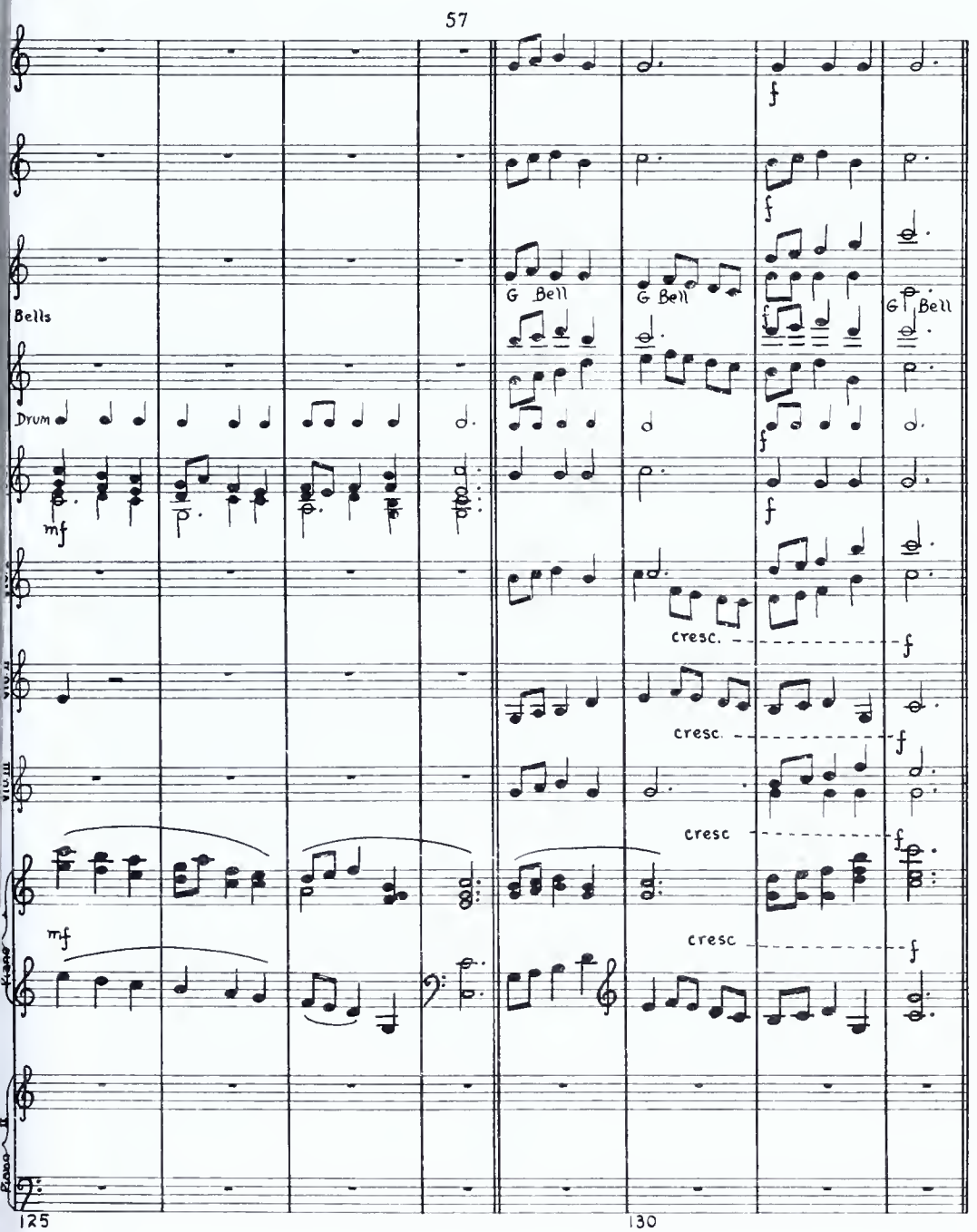

52
Flag
Oear
Mar
Orch B.
Drum
Psal
Vio I
Vio II
Vio III
mf
Piano I
f
mf
Piano II
85
90

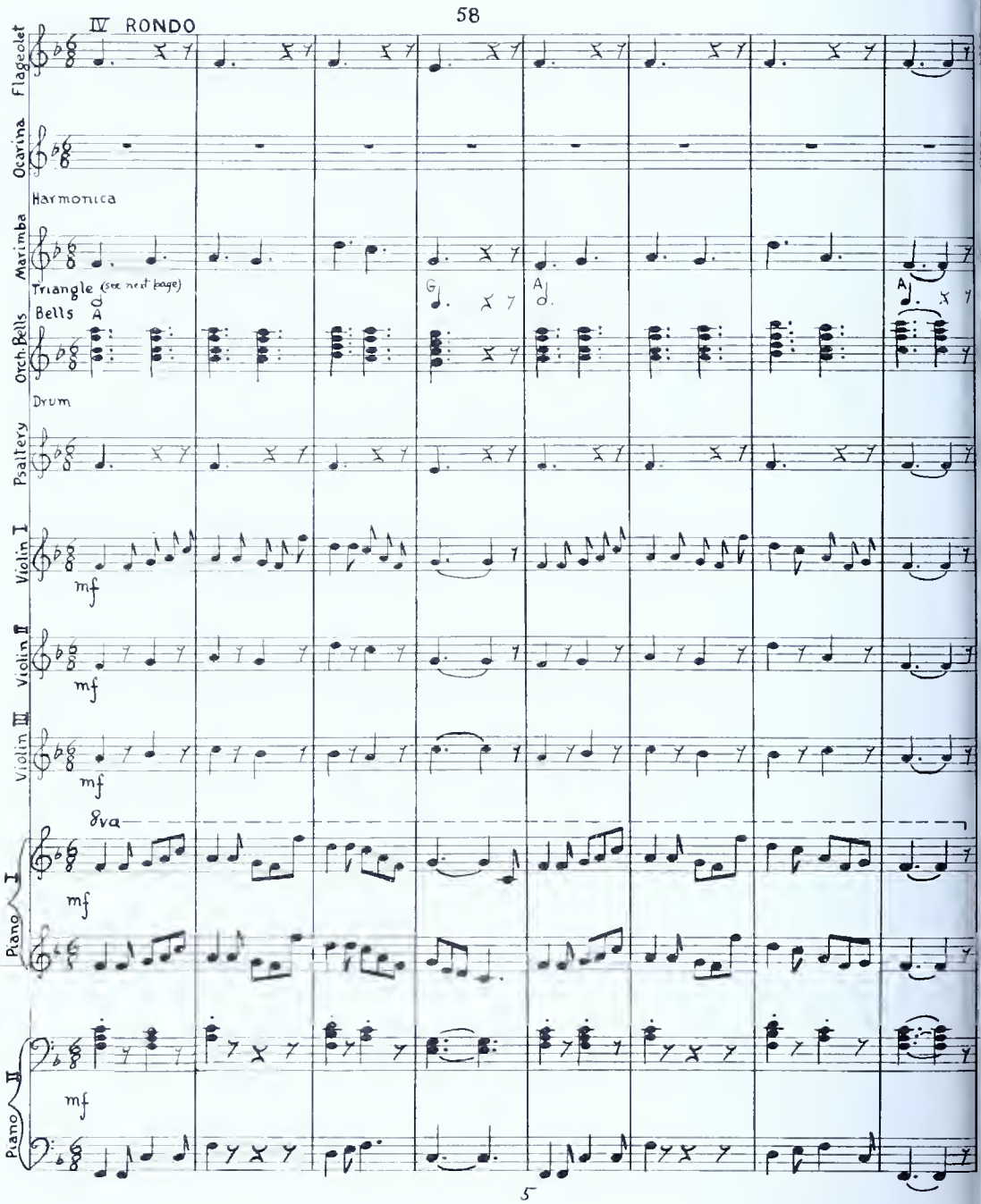

53
Vcar.
Mar.
Orch. B
Psal.
Vio I
Vio II
Vio III
Piano I
Piano II
p
95
100

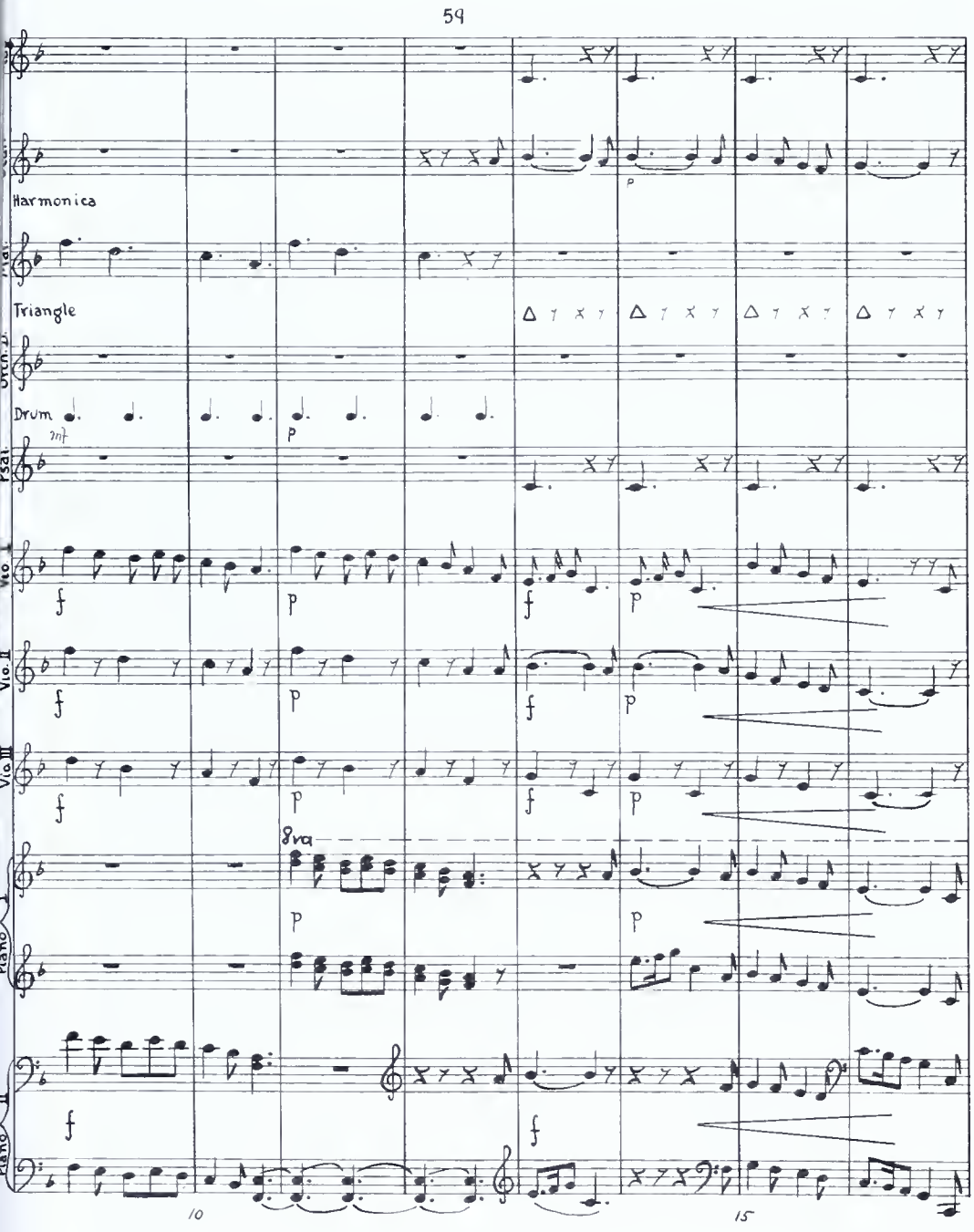

54
Flag.
Ocar.
Mar.
Orch B
Psal
Vio I
Vio II
Vio III
Piano I
Piano II
p
105

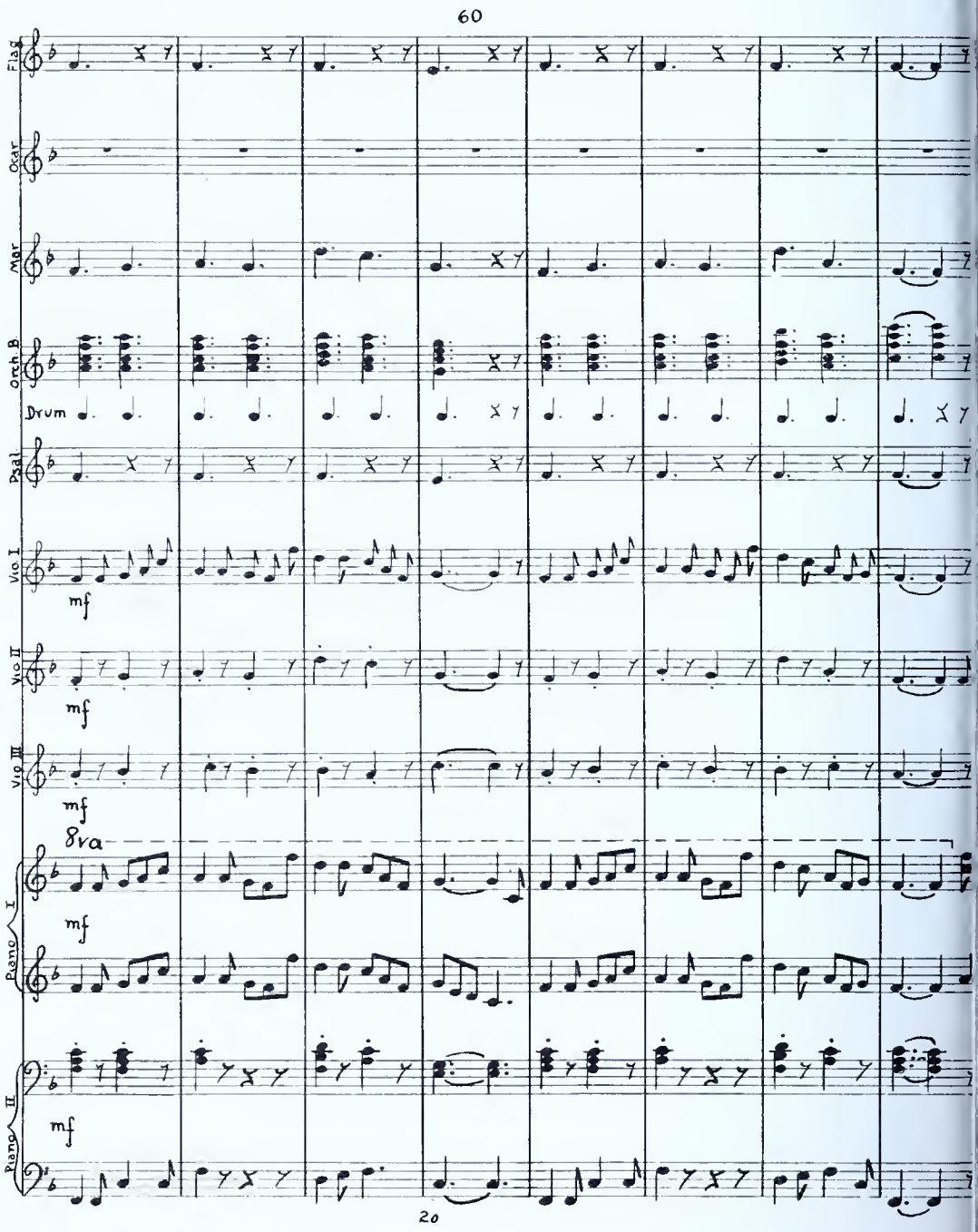

55
Drum
rit
f
p
rit
f
p
rit.
f
p
rit.
f
mf
a tempo
f
110
115

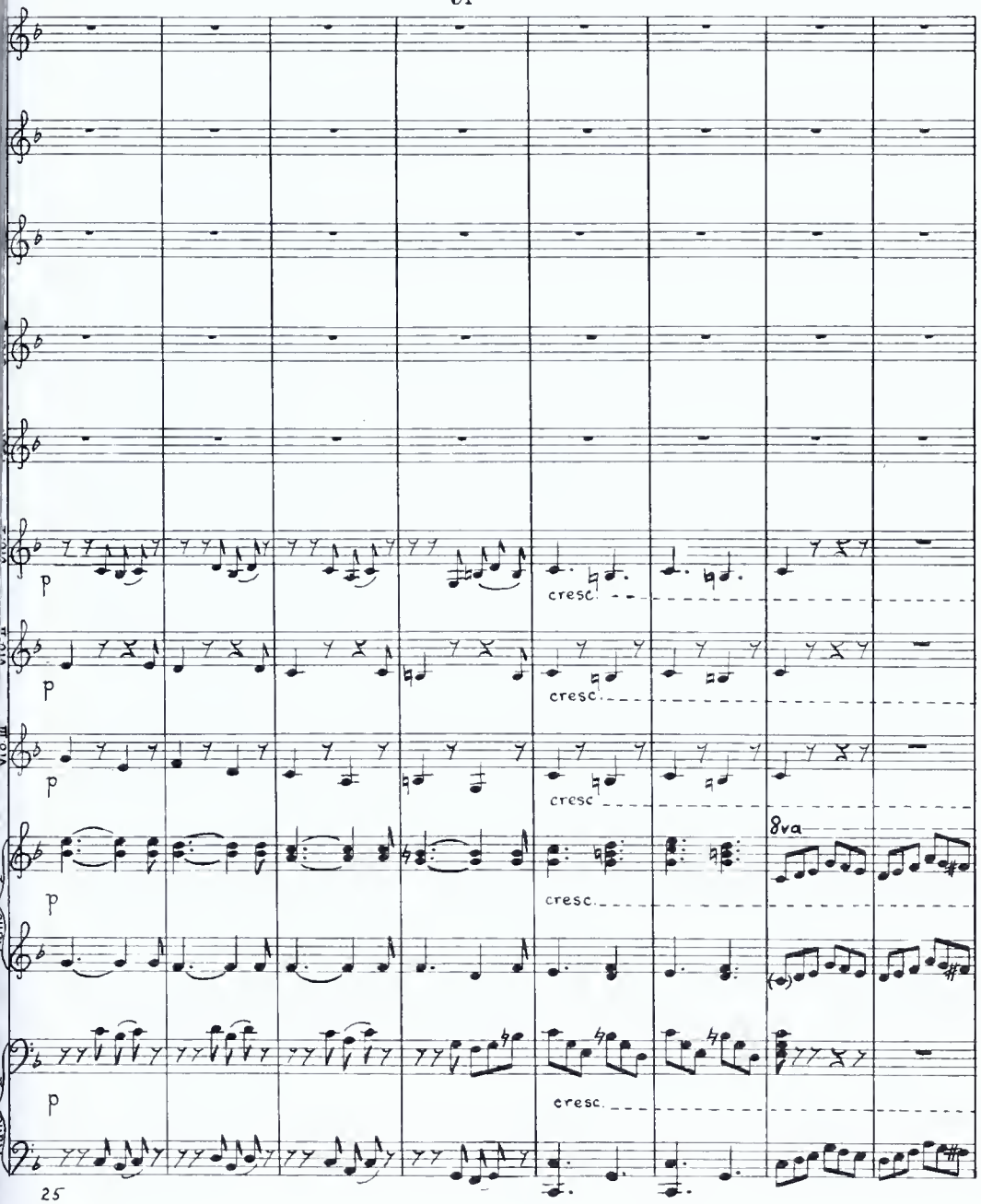

56
Flag
Ocar
Mar
Orch B
Drum
Psal
Vio I
Vio II
Vio III
Piano I
Piano II
p
cresc.
dim.
8va
120

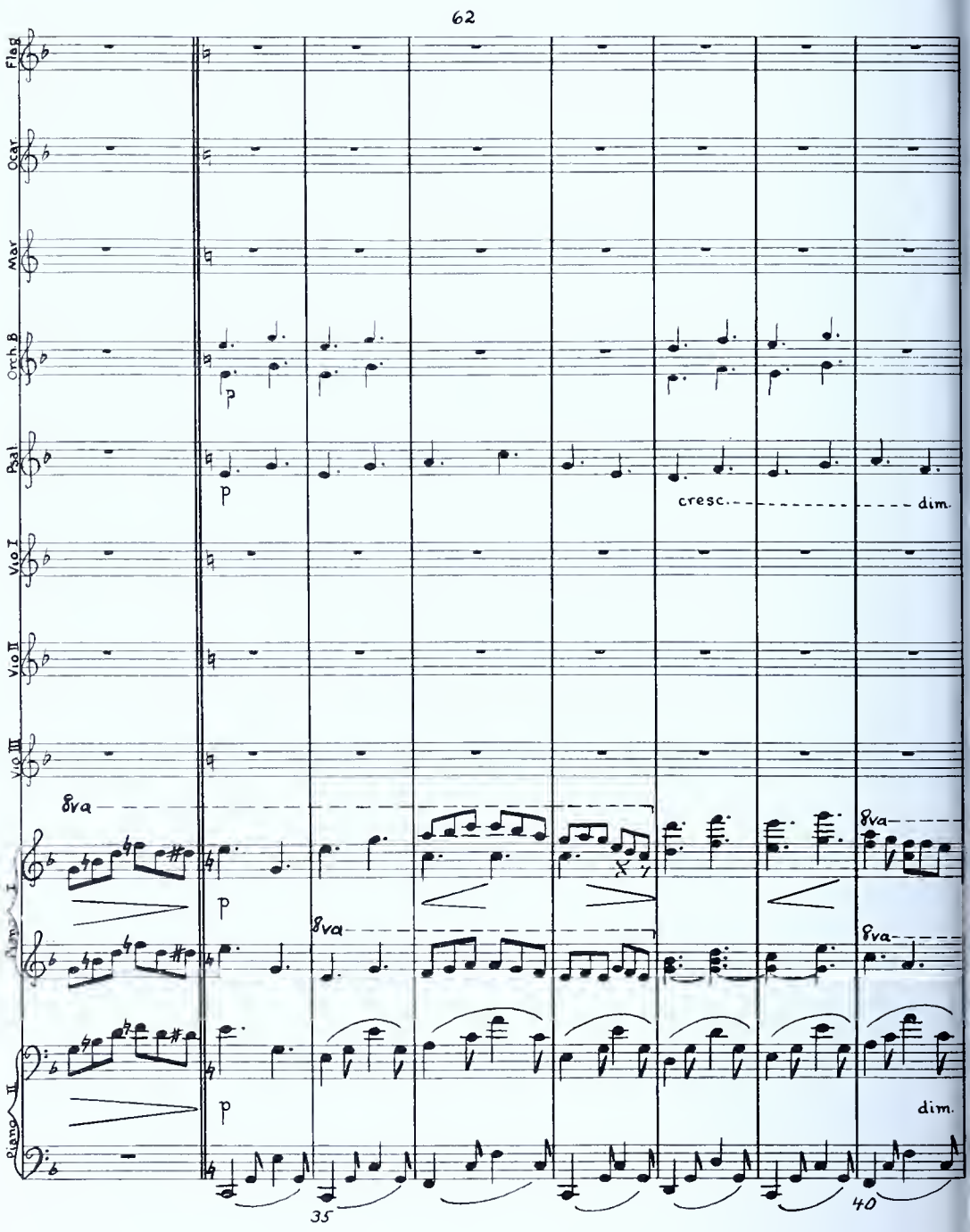

57
Bells
G Bell
G Bell
G Bell
Drum
mf
f
cresc.
cresc.
cresc
cresc
mf
125
130

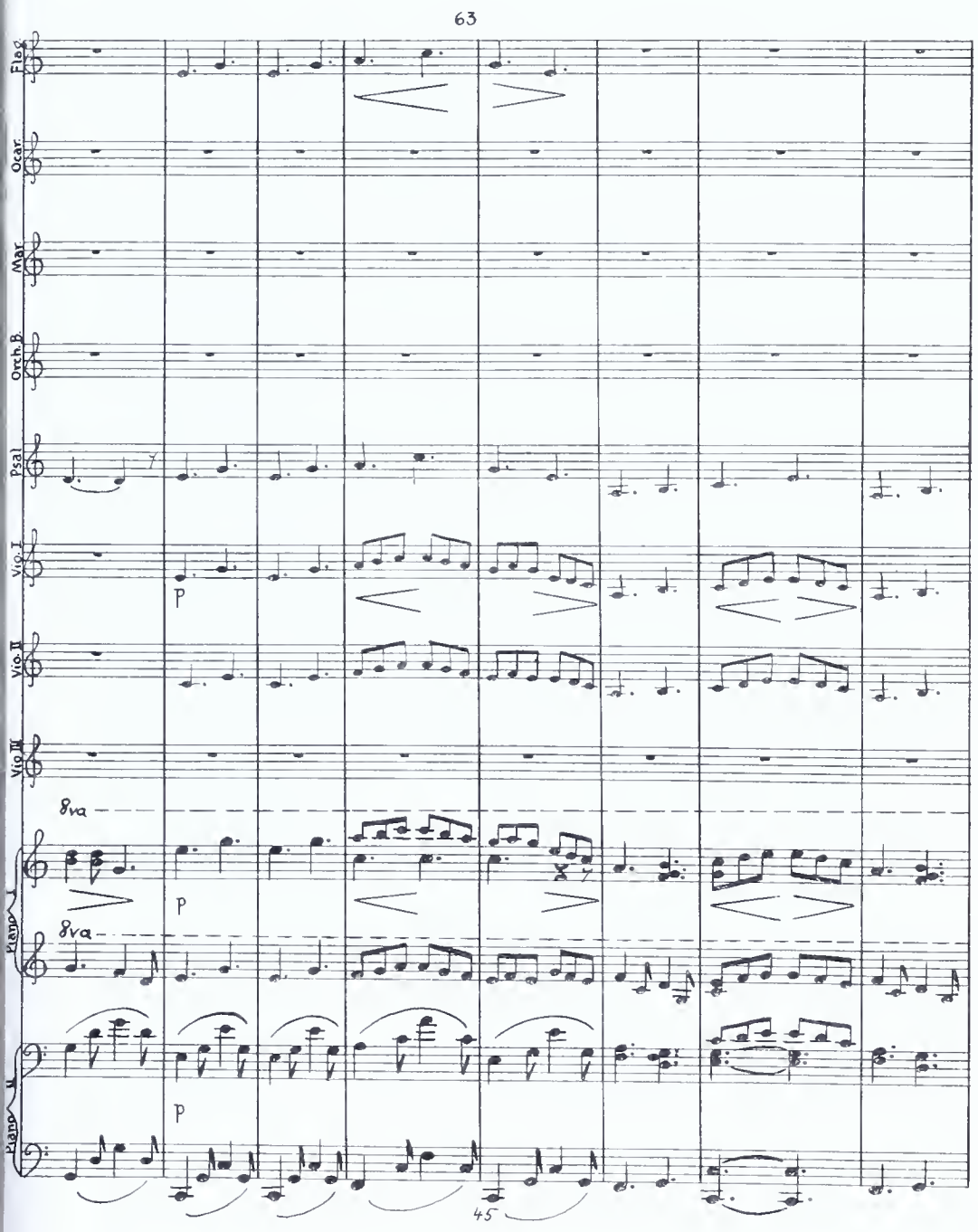

IV RONDO
58
Flageolet
Ocarina
Harmonica
Marimba
Triangle (see next page)
Bells
Orch. Bells
Drum
Psaltery
Violin I
Violin II
Violin III
mf
8va
Piano I
Piano II
5

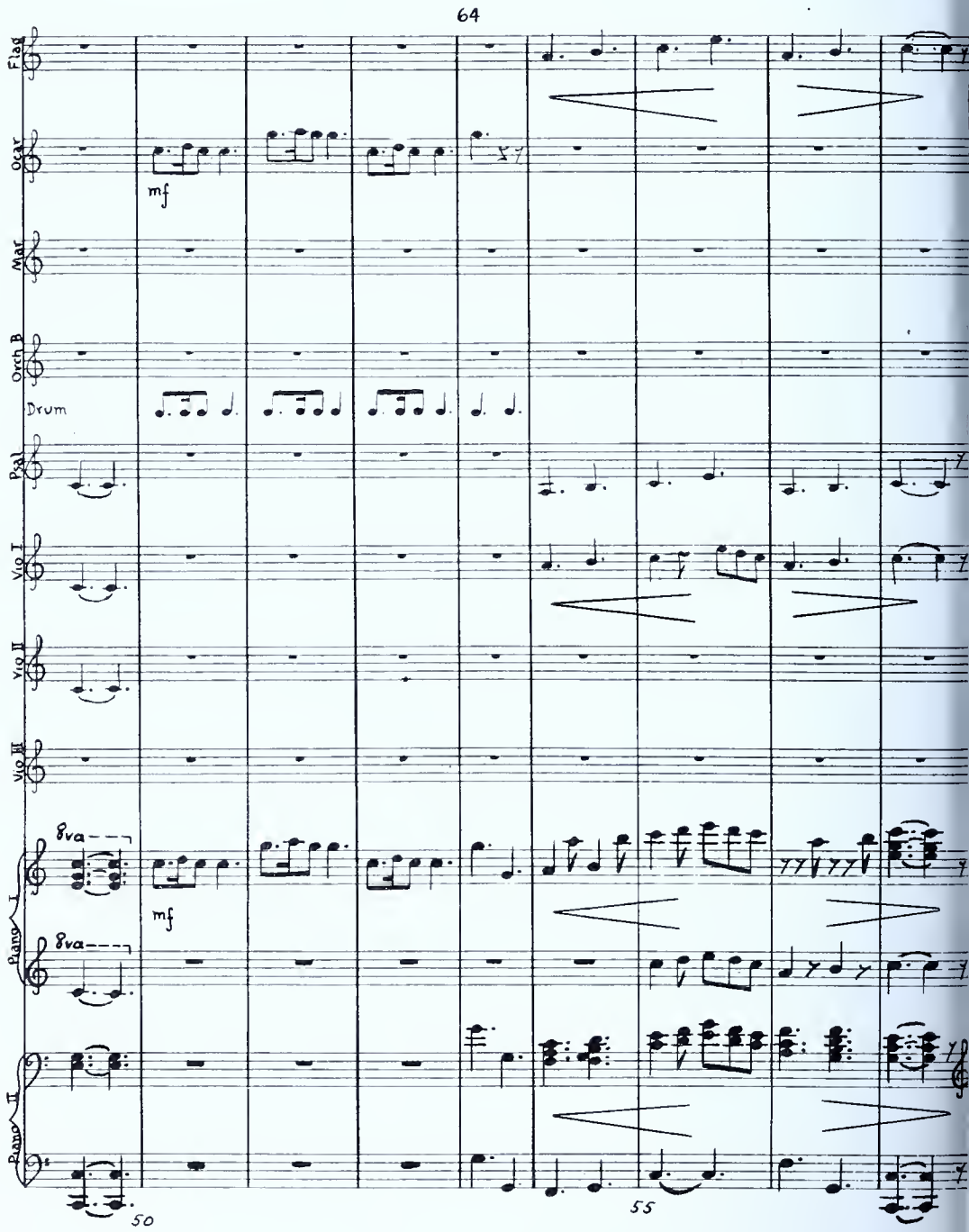

59
Harmonica
Triangle
Drum
mf
p
Vio. I
Vio. II
Vio. III
8va
Piano I
Piano II
10
15

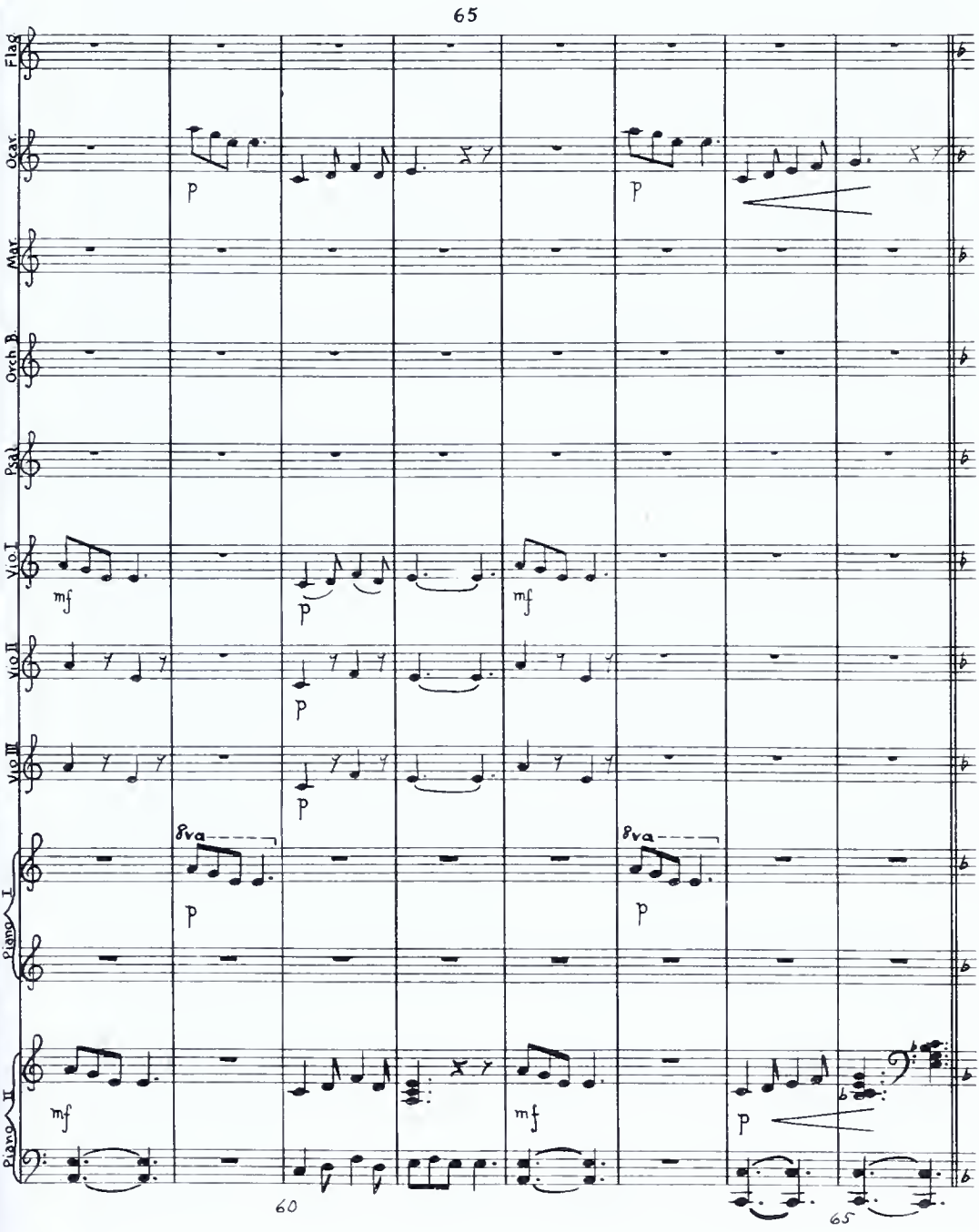

60
Flag
Oear
Mar
Orch B
Drum
Psal
Vio I
mf
Vio II
mf
Vio III
mf
8va
Piano I
mf
Piano II
mf
20

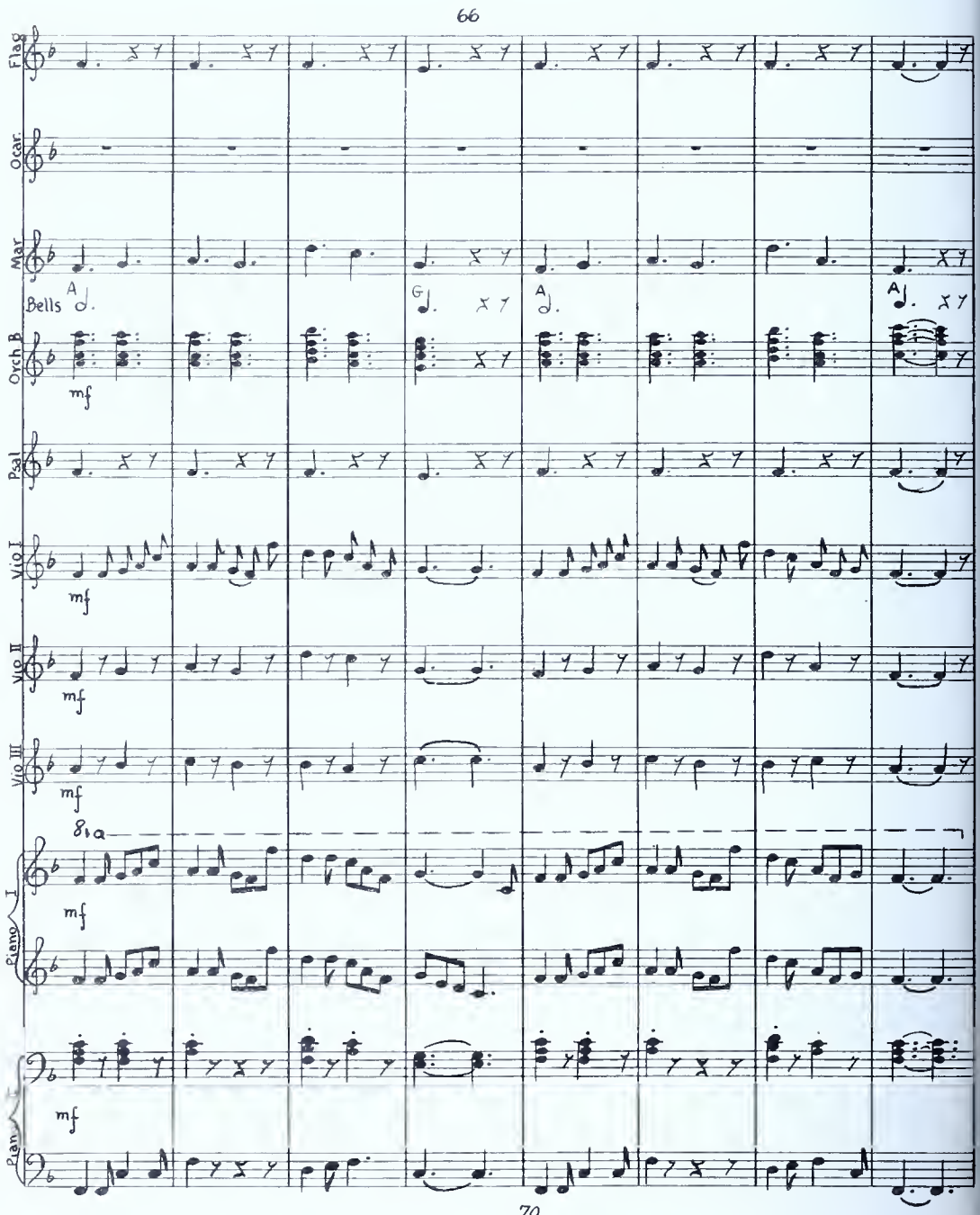

61
p
cresc.
8va
25
30

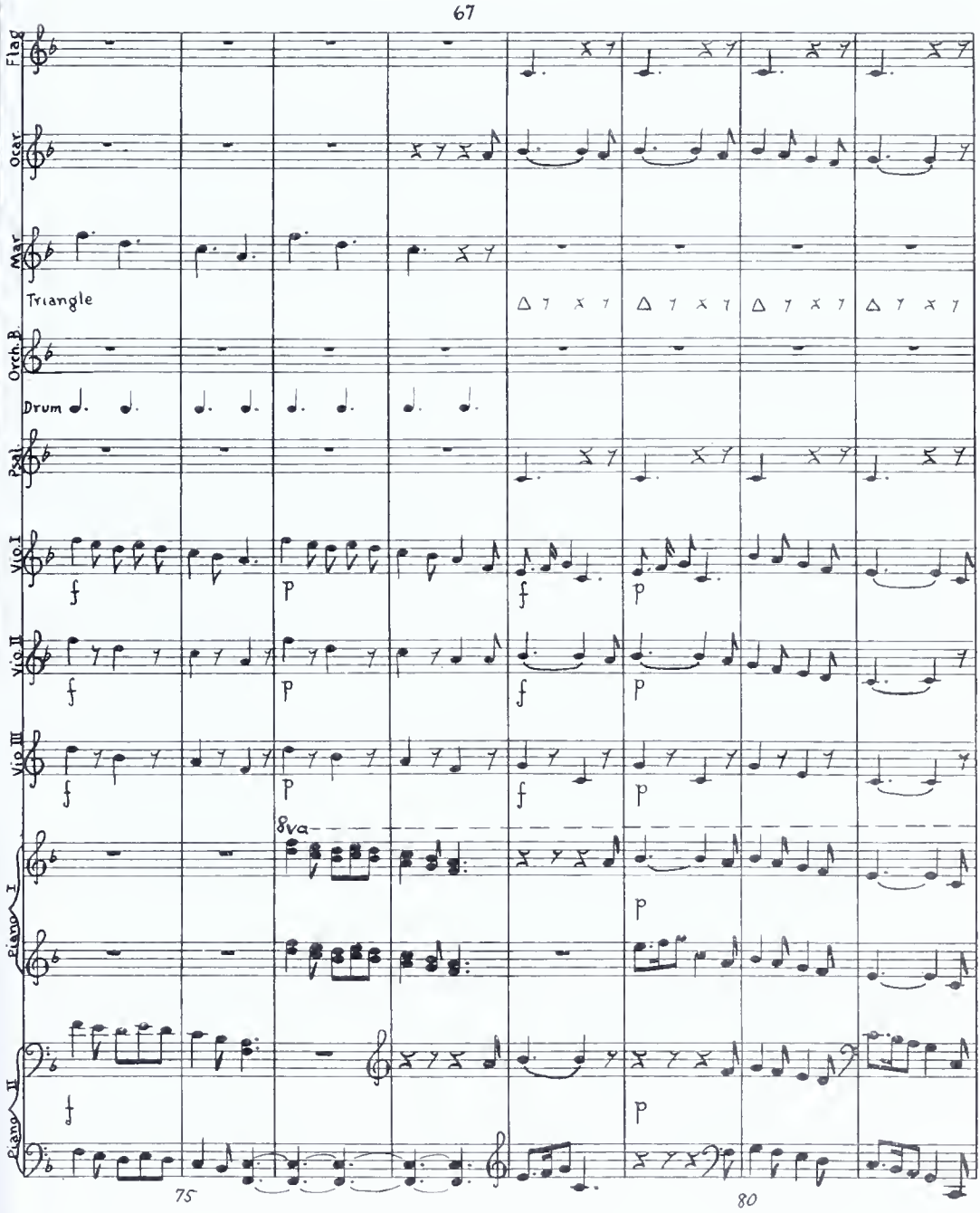

62
Flag
Oear
Mar
Orch.B
Psal
Vio I
Vio II
Vio III
Harp I
Piano II
8va
p
cresc.
dim.
35
40

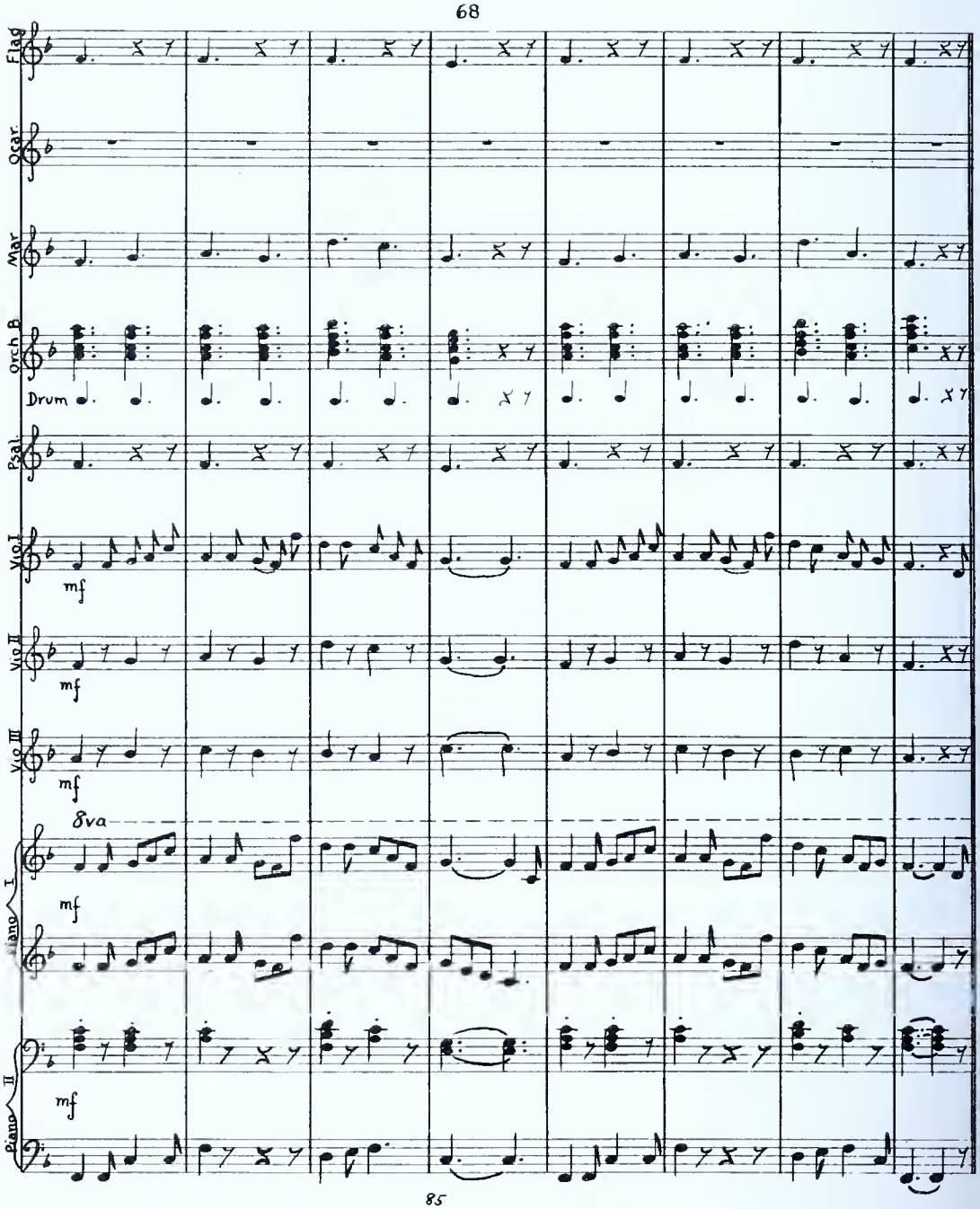

63
Fleg
Ocar
Mar
Orch.B
Psal
Vio.I
Vio.II
Vio.III
8va
P
8va
Piano
P
Piano
45

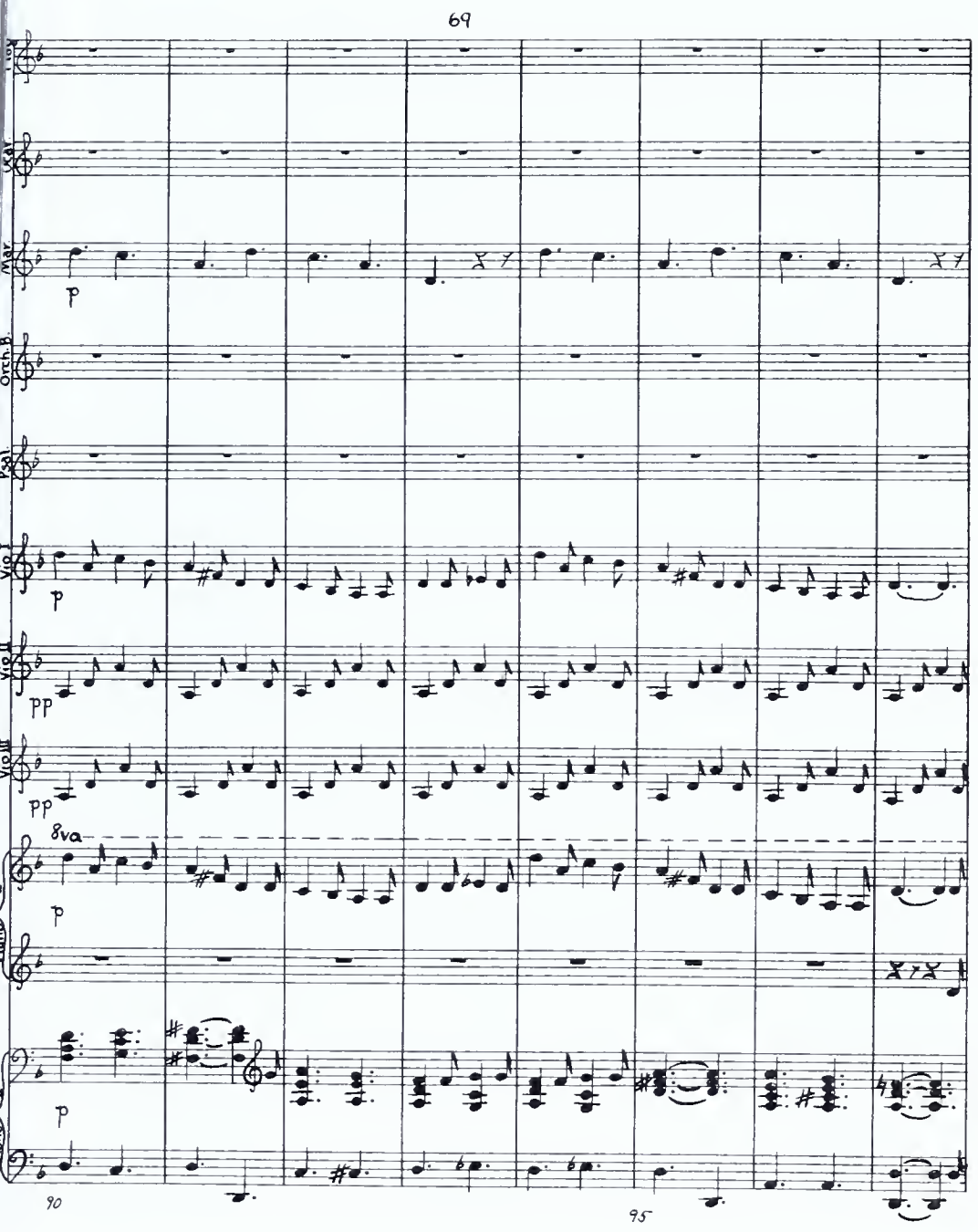

64
Flag
Oear
mf
Mar
Orch B
Drum
Pzal
Vio I
Vio II
Vio III
8va
mf
8va
Piano I
Piano II
50
55

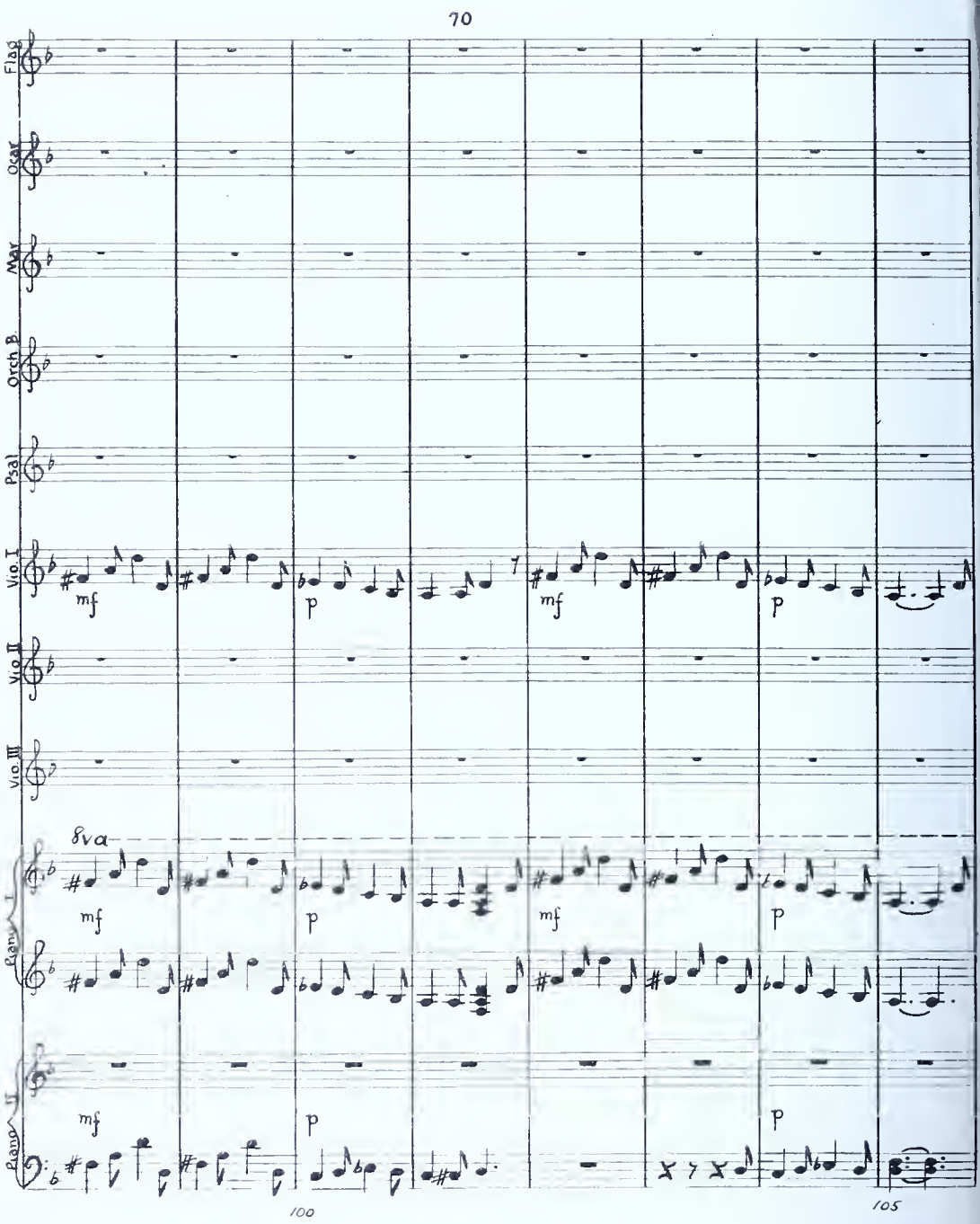

65
Flag.
Ocar.
Mar.
Orch B.
Psal.
Vio I
Vio II
Vio III
Piano I
Piano II
8va
8va
60
65

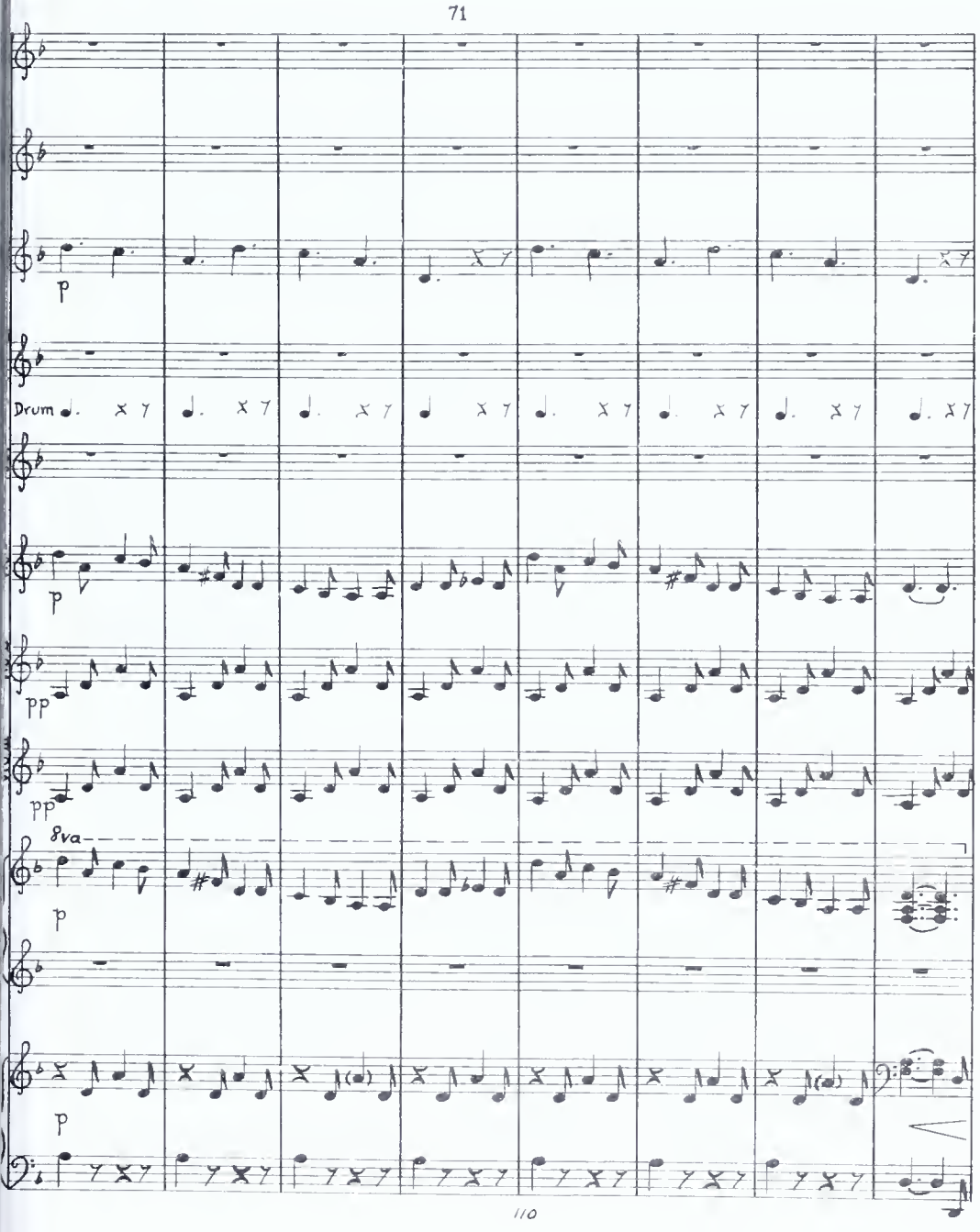

66
Flag
Ocar.
Mar
Bells
A
G
A
A
Orch B
mf
Psal
Vio I
mf
Vio II
mf
Vio III
mf
8va
Piano I
mf
Pian
mf
70

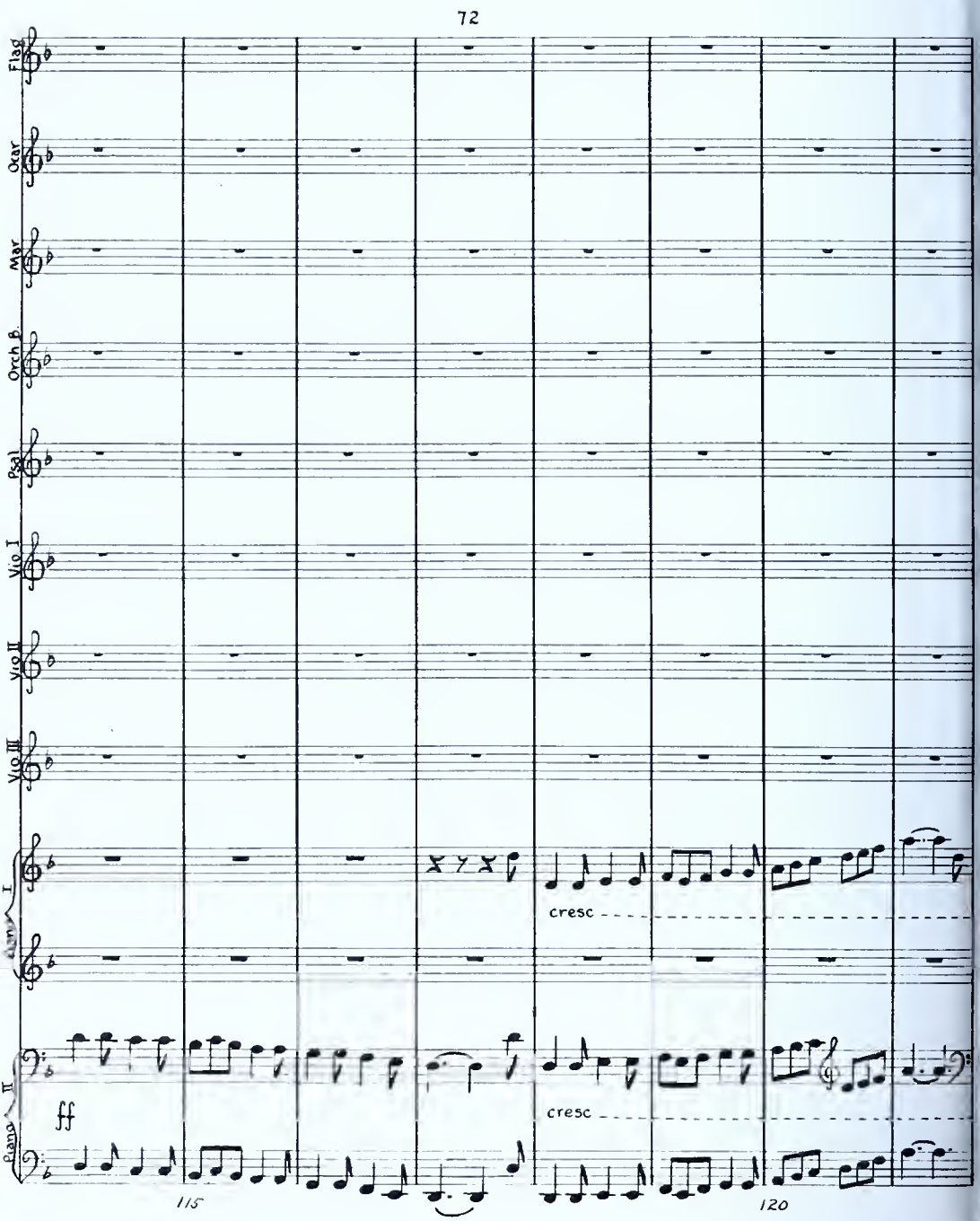

67
Flag
Oear
Mar
Triangle
Orch.B
Drum
Pedal
Vio I
Vio II
Vio III
8va
Piano I
Piano II
f
p
75
80

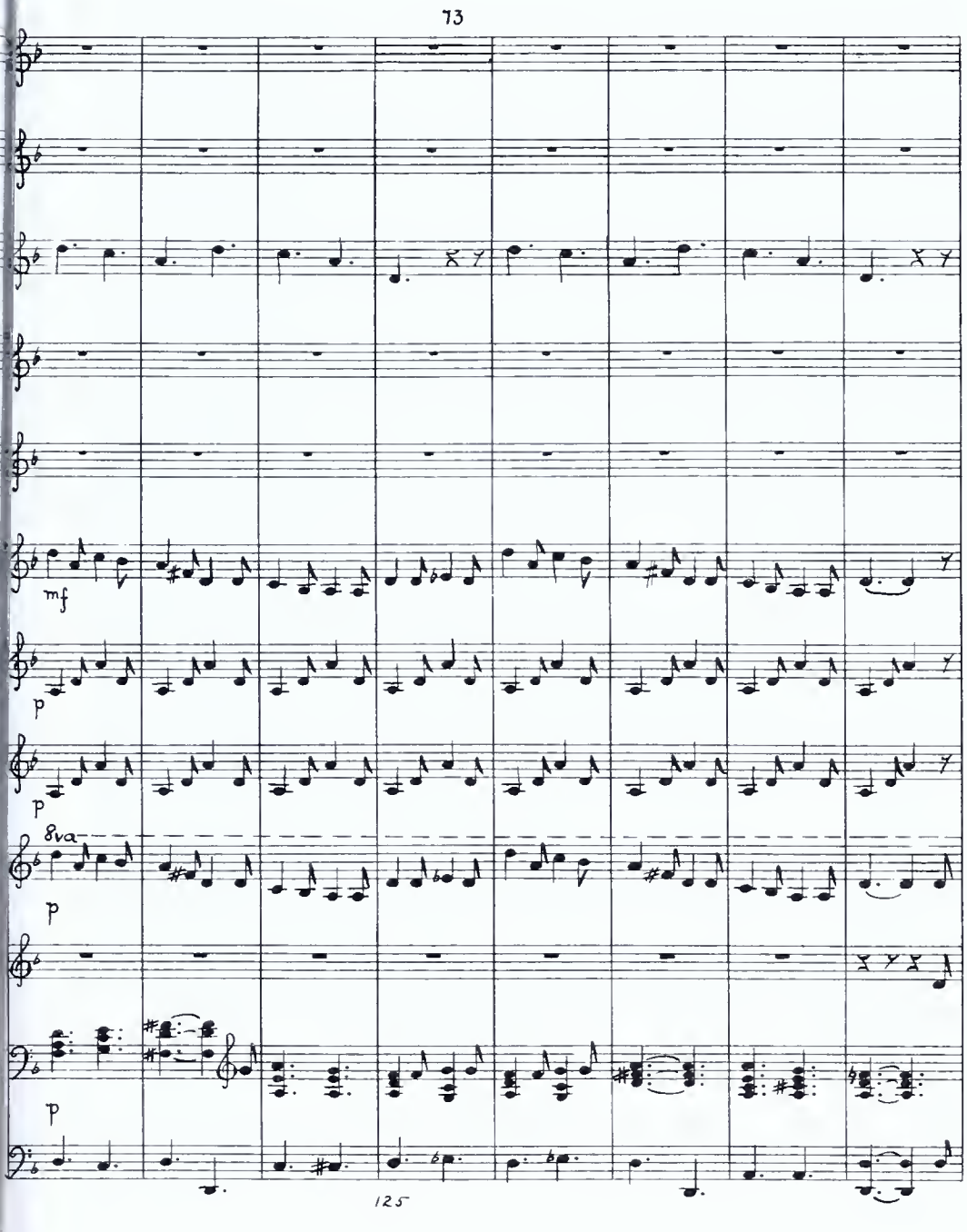

68
Flag
Oear
Mar
Orch B
Drum
Bal
Vio I
mf
Vio II
mf
Vio III
mf
8va
Piano I
mf
Piano II
mf
85

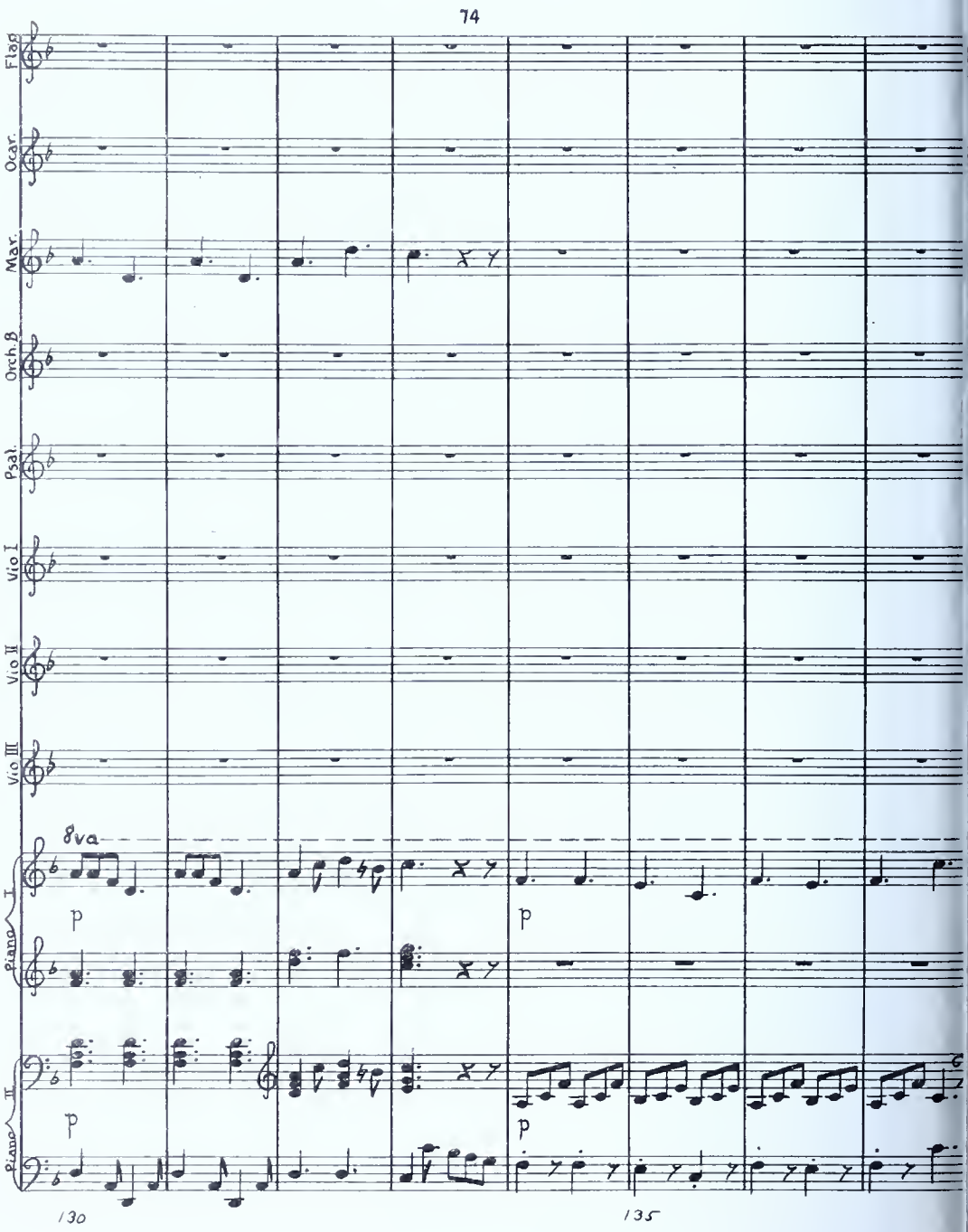

69
Flor
Kar
Mar
Orch. B.
Psal.
Vio I
Vio II
Vio III
Piano I
Piano II
p
pp
8va
90
95

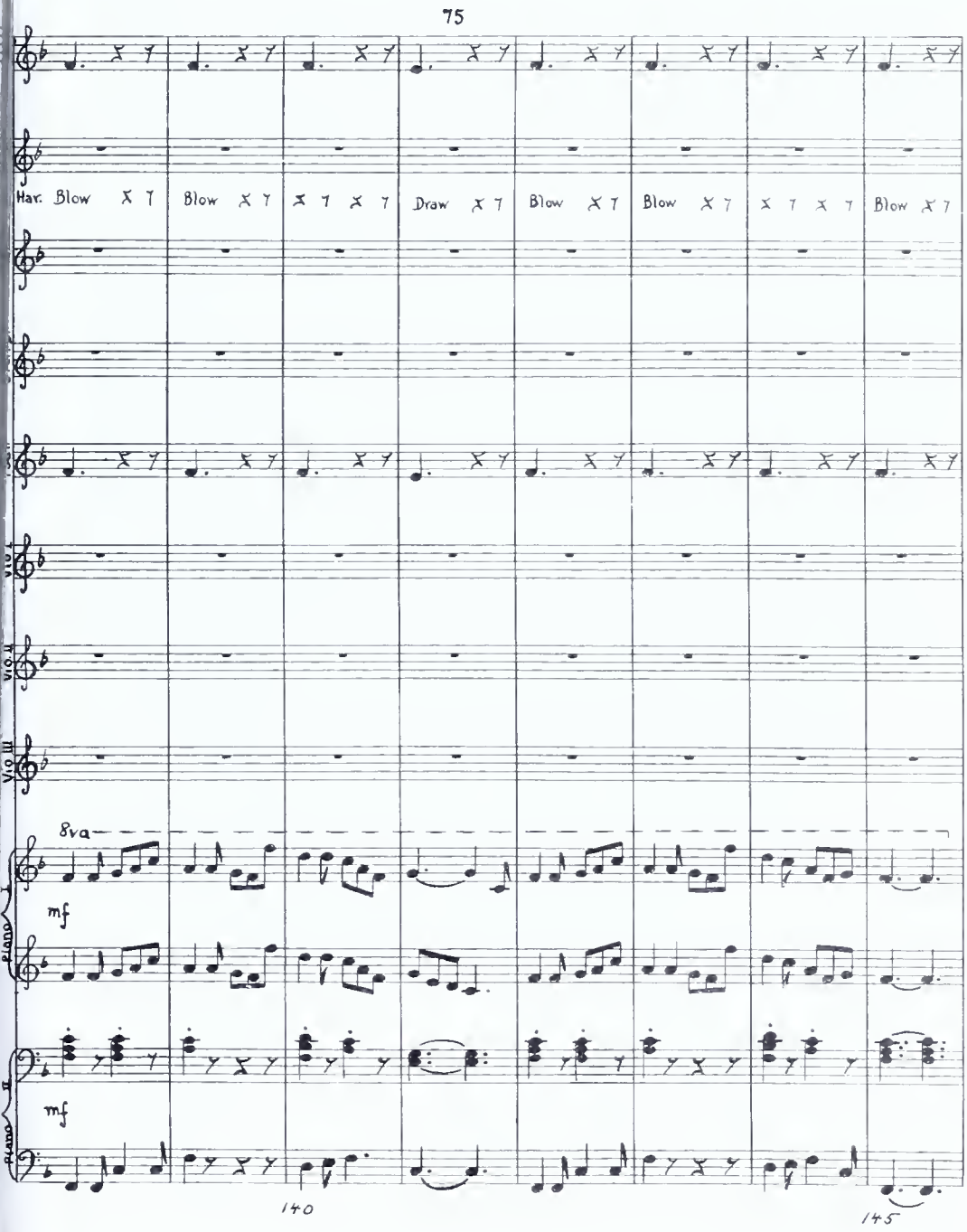

70
Flag
Oboe
Mar
Orch B
Psal
Vio I
Vio II
Vio III
8va
Piano I
Piano II
mf
p
mf
p
mf
p
mf
p
100
105

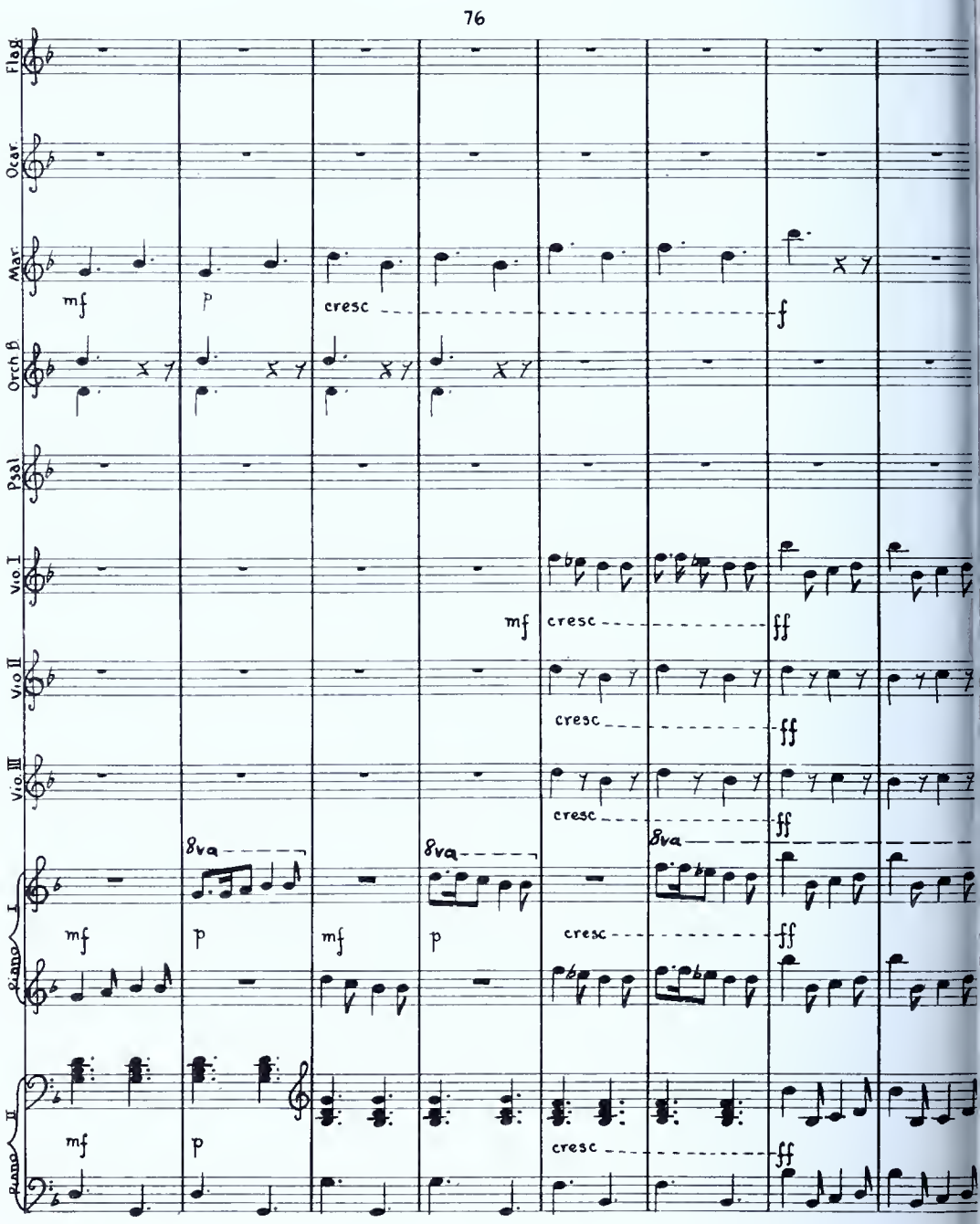

71
Drum
p
pp
pp
8va
p
p
110

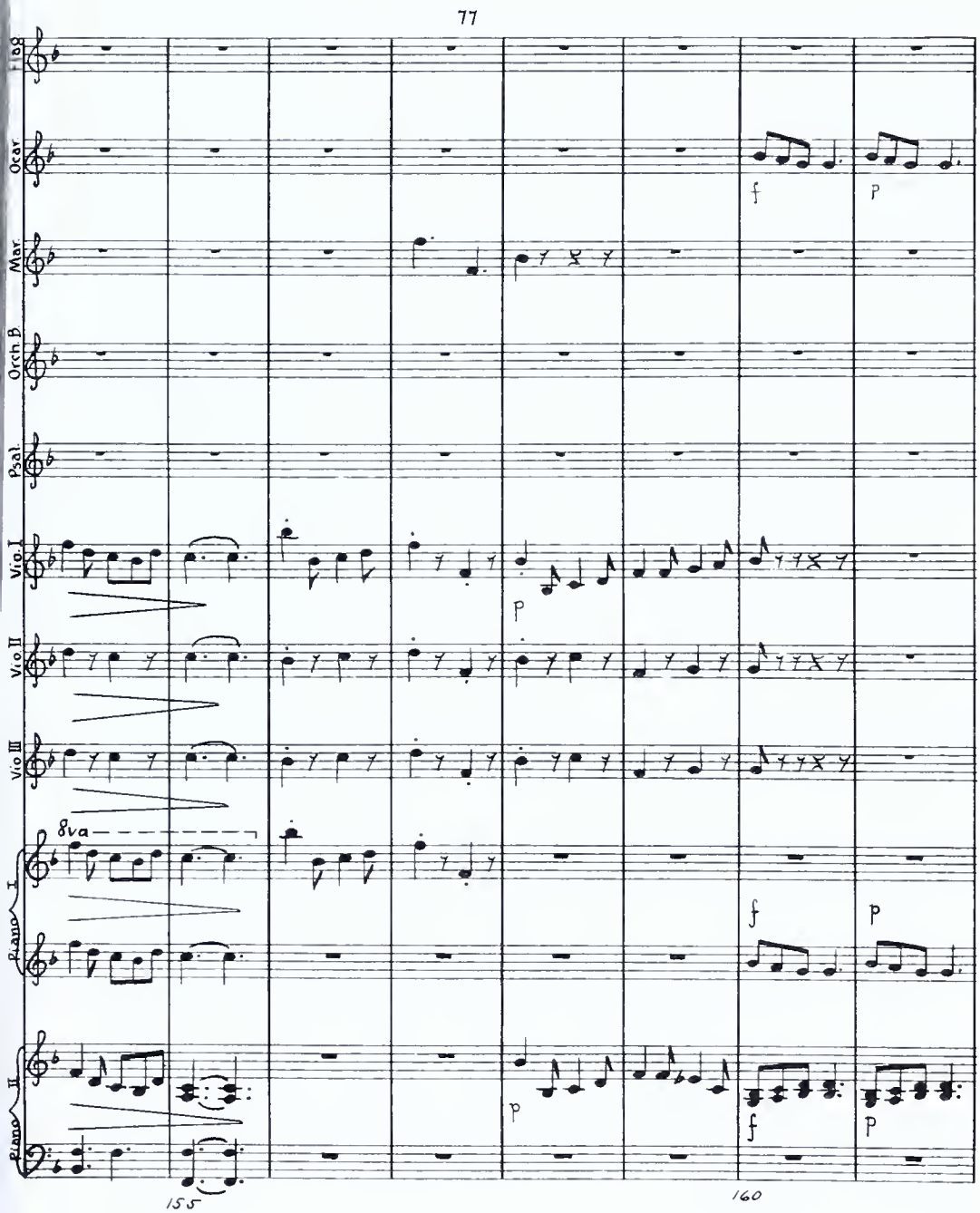

72
Flag
Ocar
Mar
Orch B.
Psal
Vio I
Vio II
Vio III
Piano I
Piano II
cresc
cresc
ff
115
120

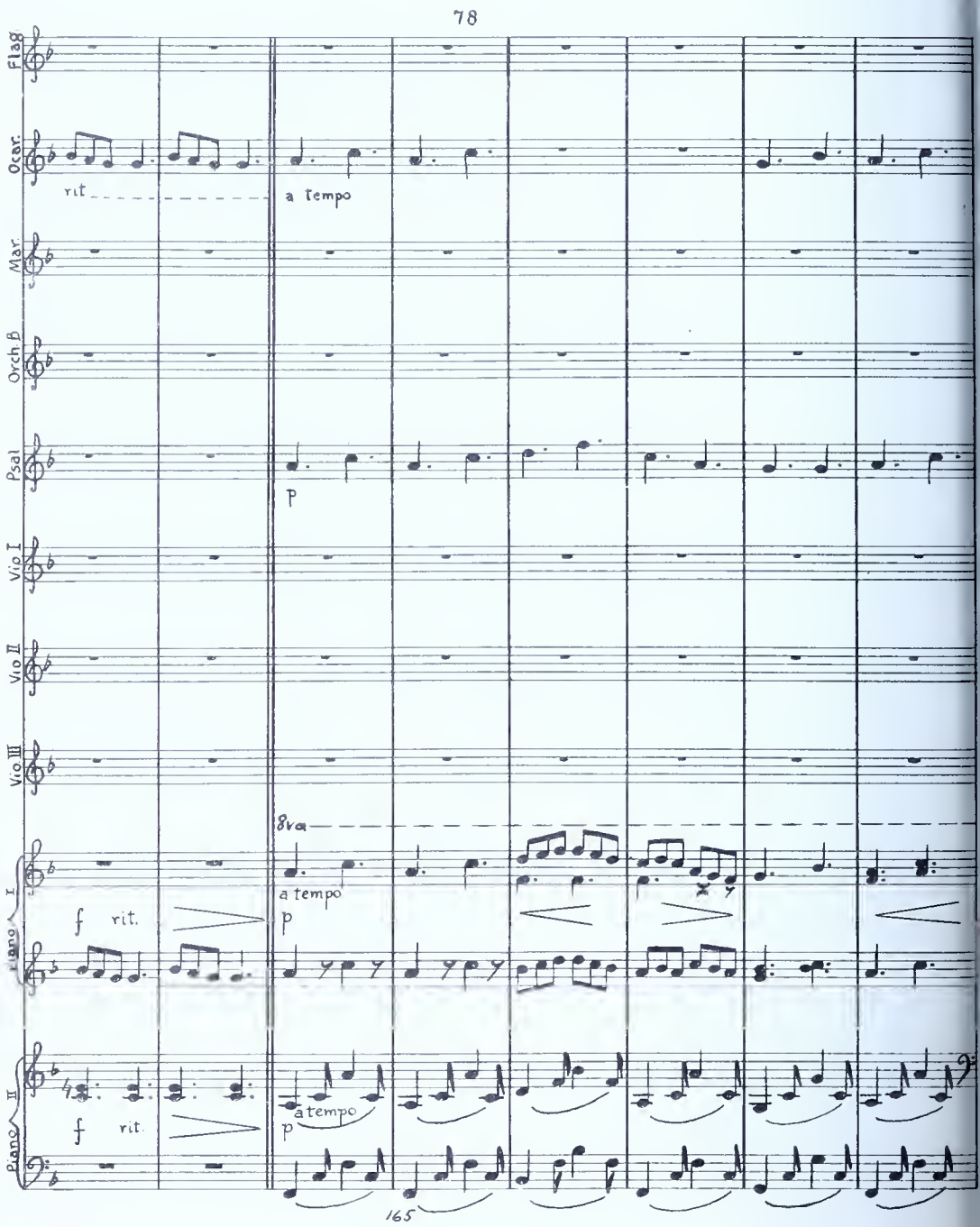

73
mf
p
p
8va
p
p
125


74
Flag
Ocar.
Mar.
Orch. B
Psal.
Vio I
Vio II
Vio III
8va
Piano I
Piano II
p
p
p
p
130
135


75
Har. Blow
Blow
Draw
Blow
Blow
Blow
Vio I
Vio II
Vio III
8va
mf
Piano I
mf
Piano II
140
145


76
Flag.
Ocar.
Mar.
Orch B.
Psal.
Vio I
Vio II
Vio III
Piano I
Piano II
mf
p
cresc
f
ff
8va
150


77
Fag
Oear
Mar
Orch B
Psal
Vio I
Vio II
Vio III
8va
Piano I
Piano II
f
p
f
p
p
f
p
155
160

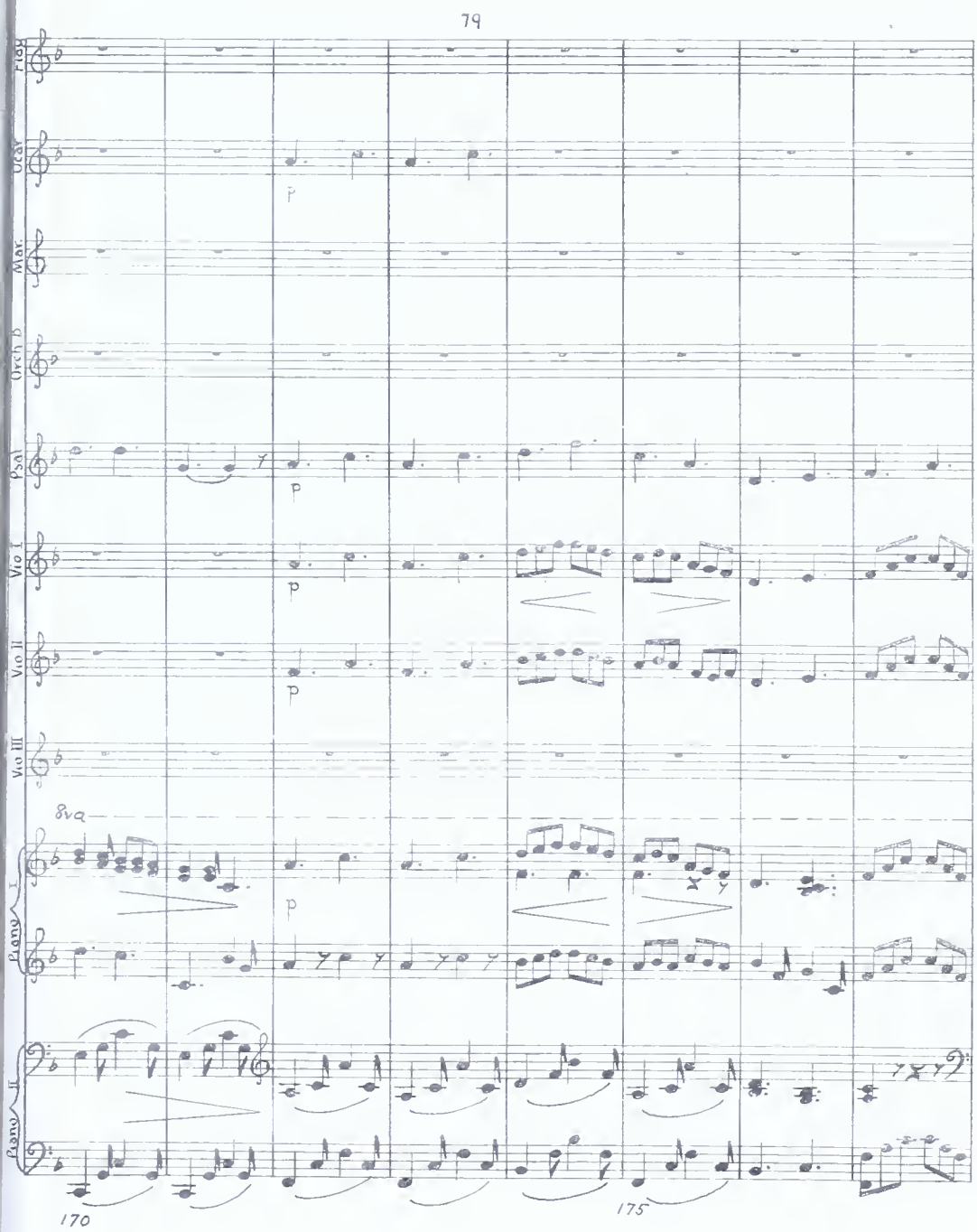

78
Flag
Ocar.
rit
a tempo
Mar.
Orch.B
Psal
p
Vio I
Vio II
Vio III
8va
a tempo
f rit.
p
Piano I
Piano II
f rit.
a tempo
p
165

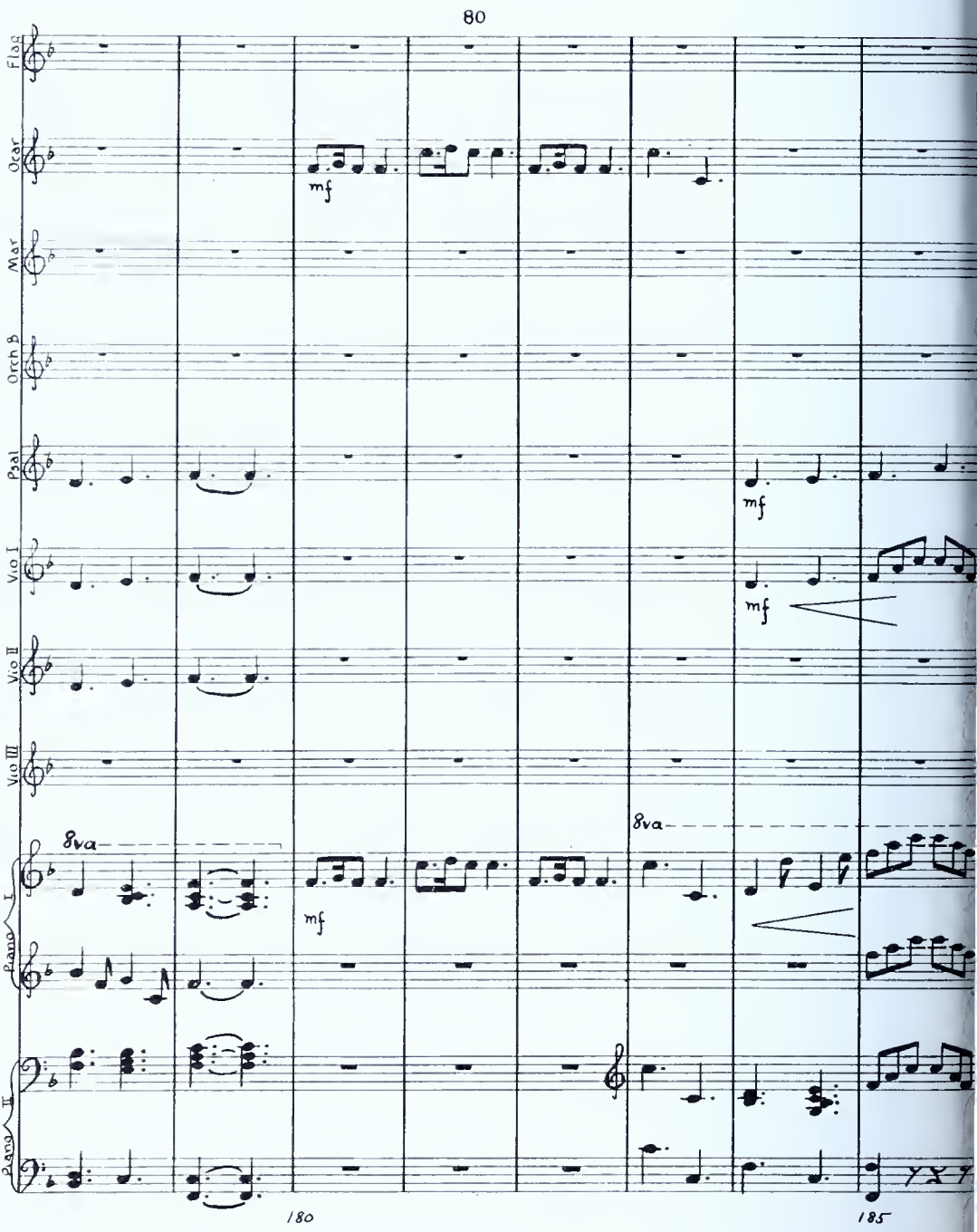
79

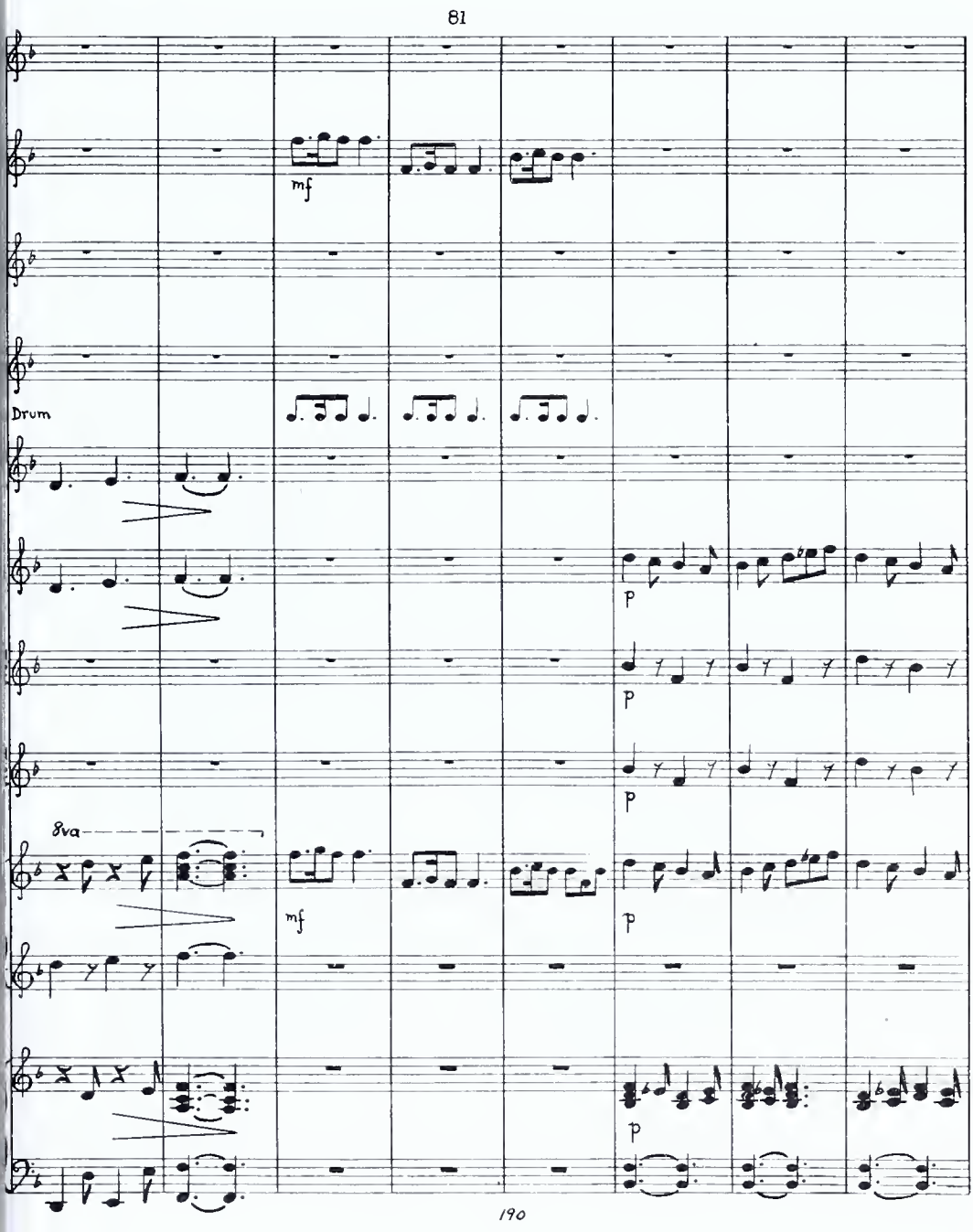
Flag.
Ocar.
Mar.
Orch B
Psal
Vio I
Vio II
Vio III
8va
Piano I
Piano II

p
p
p
p
p

170
175




80
Flgs
Oear
Mar
Orch B
Pzal
Vio I
Vio II
Vio III
Piano I
Piano II
8va
mf
180
185


81
mf
Drum
p
p
p
8va
mf
p
p
190

82

Flag

Ocar

Mar

Bells

A

G

Orch B

Drum

Psal

Vio I

mf

Vio II

mf

Vio III

mf

8va

8va

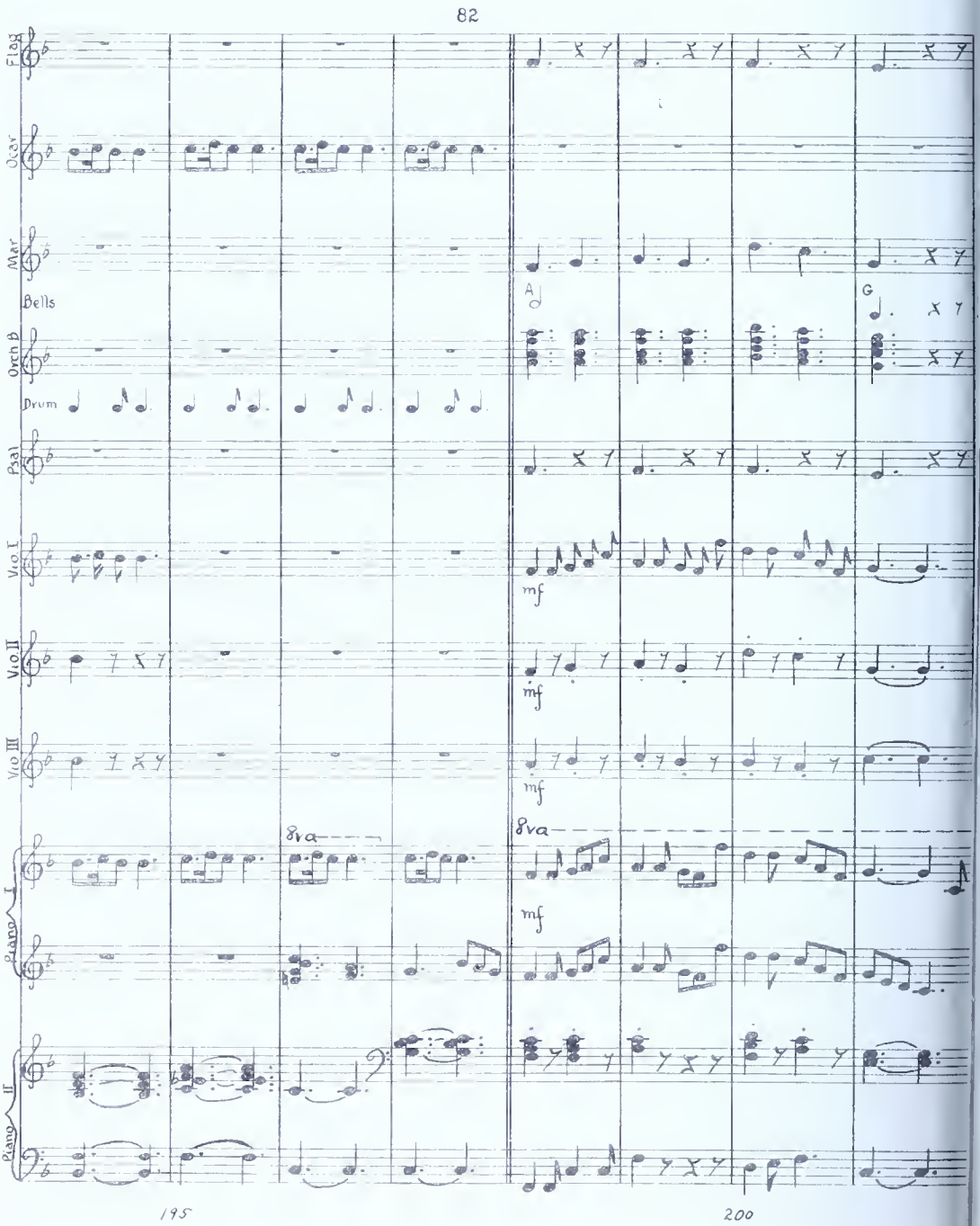
Piano I

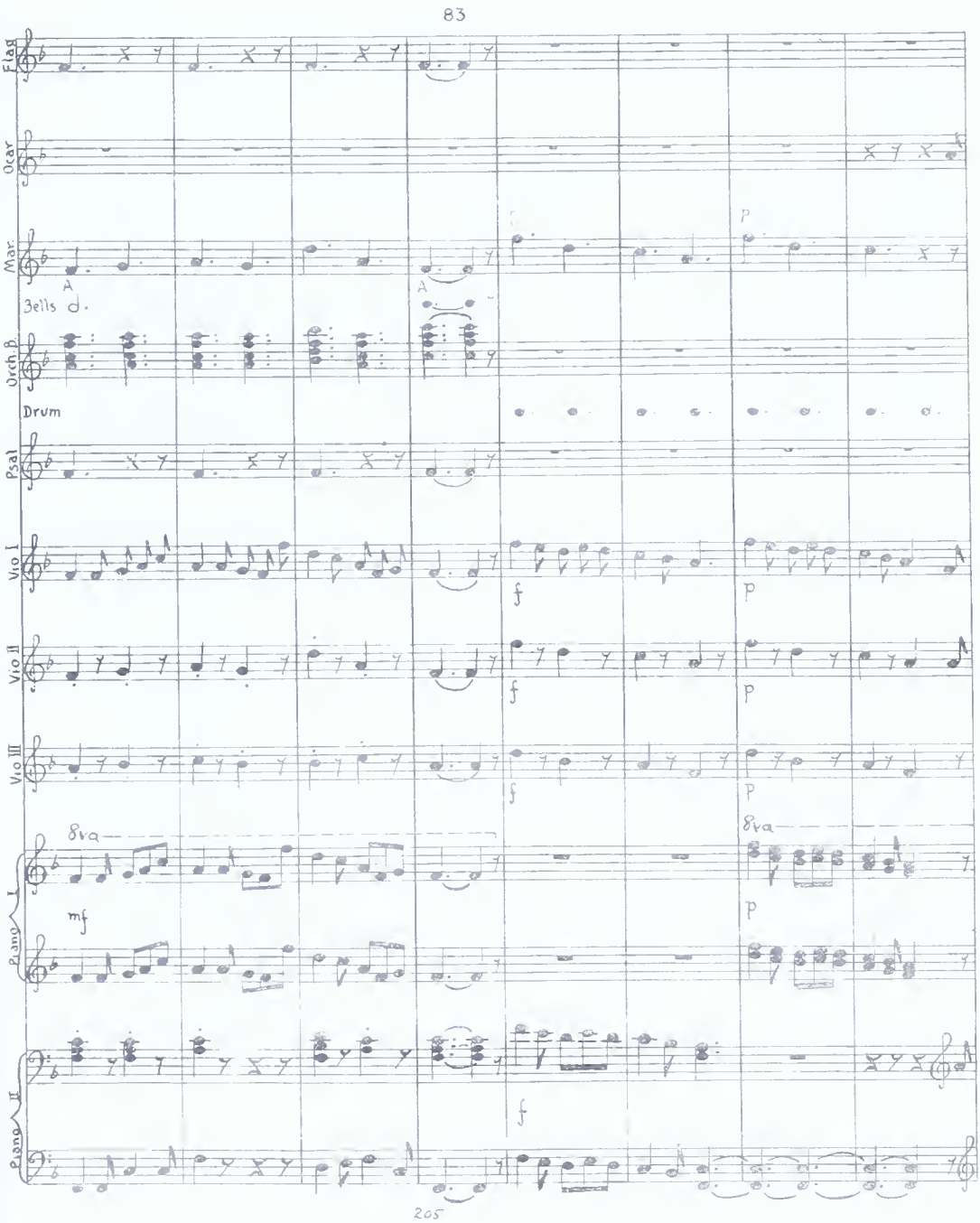
mf

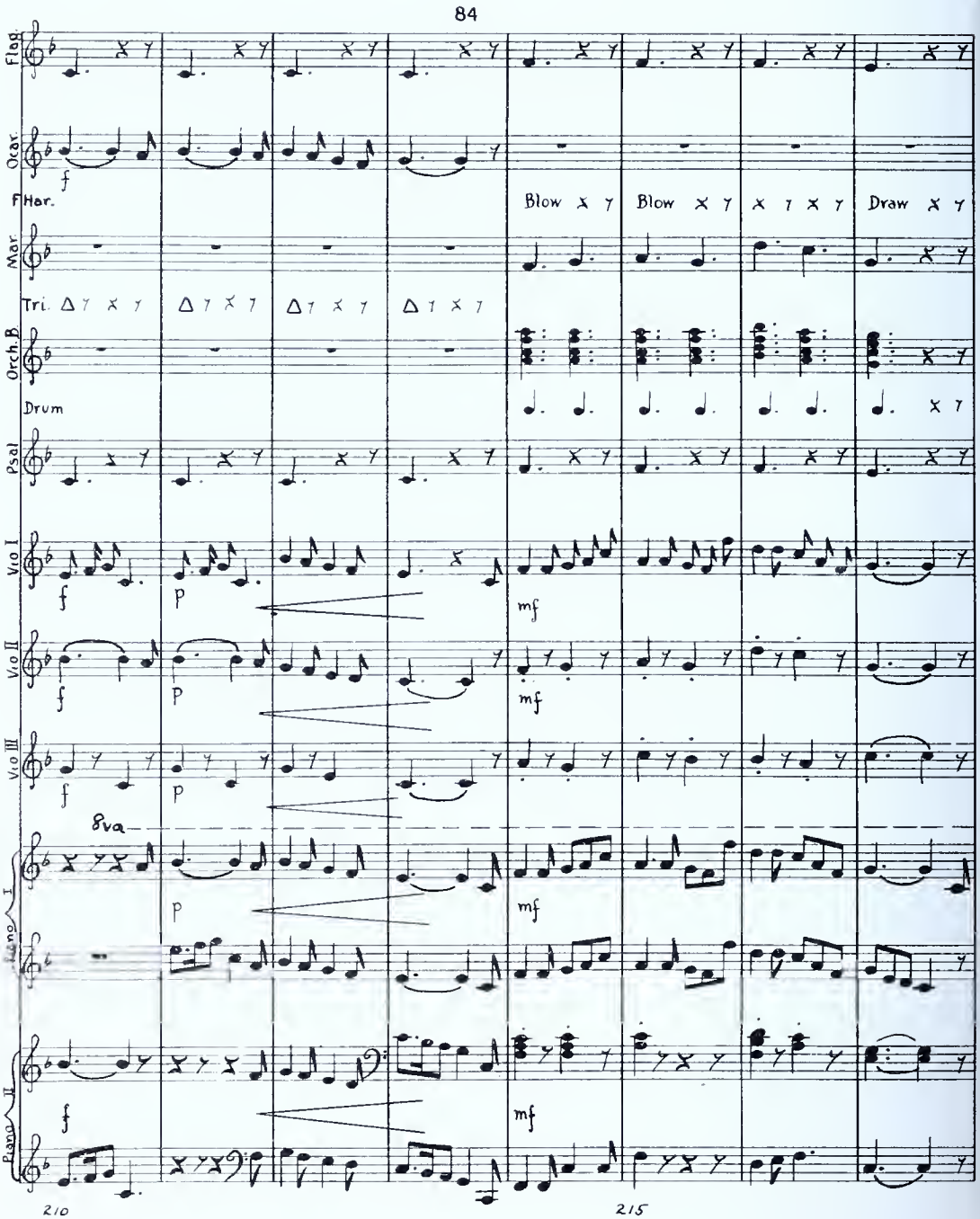
Piano II

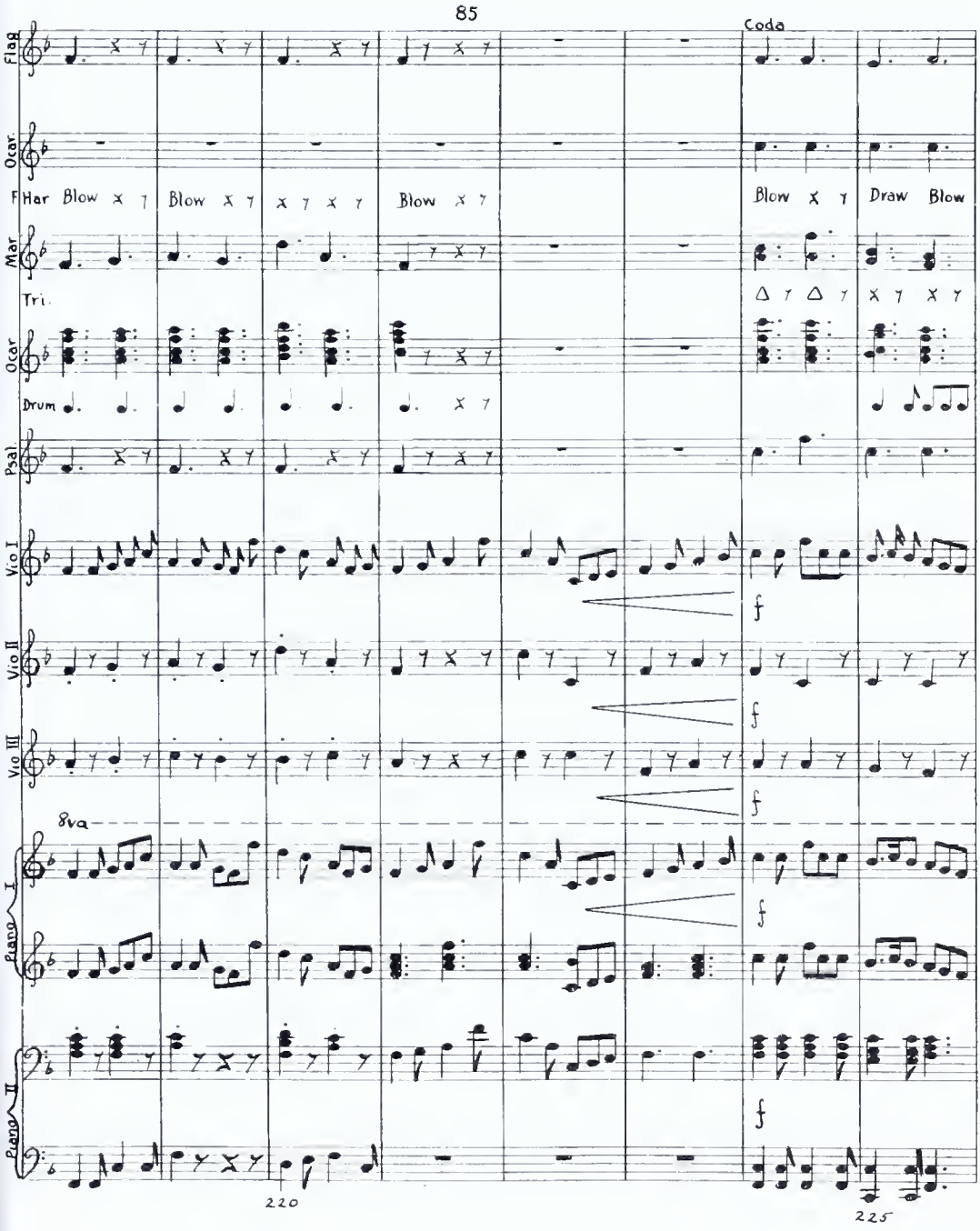
195

200




83
Flag
Ocar
Mar
A
Bells
Orch B.
Drum
Psal
Vio I
Vio II
Vio III
8va
mf
Piano I
Piano II
f
p
205


84
Flag.
Ocar.
f
F Hor.
Blow
Blow
Draw
Mar.
Tri.
Orch.B
Drum
Psal.
Vio I
f
p
mf
Vio II
Vio III
8va
Piano I
Piano II
210
215


85
Coda
Flag
Ocar
F Har Blow
Blow
Blow
Blow
Blow
Draw Blow
Mar
Tri.
Ocar
Drum
Psal
Vio I
Vio II
Vio III
8va
Piano I
Piano II
f
220
225

86

Flag.

cresc ff

Org.

F. Har. Blow Draw Blow Blow Draw Blow Blow Blow Blow Blow Blow

Mar.

Tri

Orch. b.

Drum Cymbals Cym

Psal.

cresc ff

Vio. I

cresc ff

Vio. II

cresc ff

Vio. III

cresc ff

8va

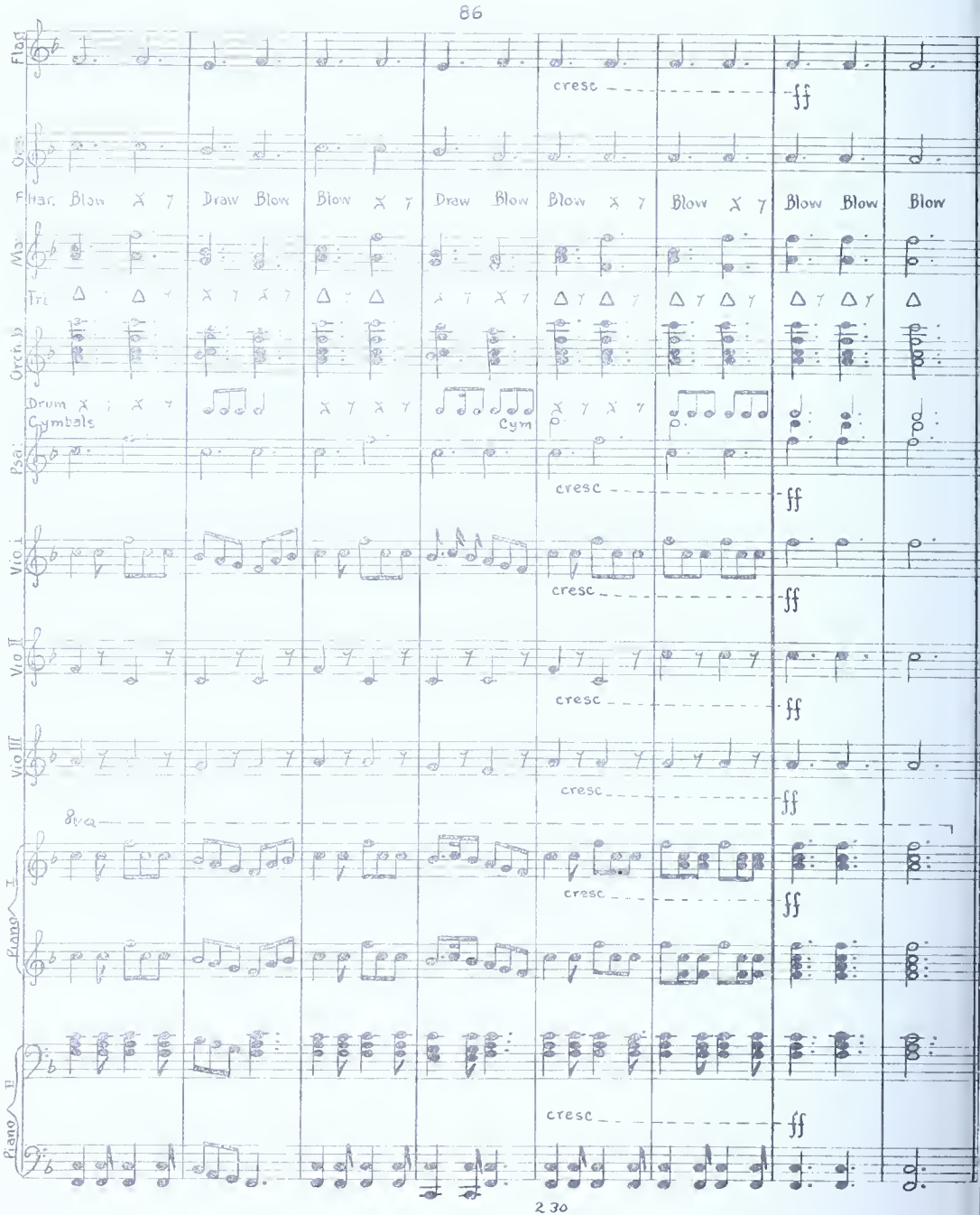
Piano I

cresc ff

Piano II

cresc ff

230



APPENDIX

QUESTIONNAIRE SENT TO PARENTS

March 25, 1930.

My dear Mr. and Mrs. ———:

It is my purpose to write an educational thesis on the Lincoln School symphonies, and before doing so I wish to take a careful inventory of their educational effects. It would help me greatly to have the opinion of the parents of the children who participated in the recent symphony and their reaction to that type of experience for their children. Would you mind writing me very frankly how you feel about it?

Please fill out the following questionnaire and return in the enclosed envelope.

1. Do you consider the recent symphony a valuable experience for your child? ..... If possible, give concrete evidence (use back of this sheet if not sufficient space is allowed). .....
.....
.....
.....

2. Was it in any way an unwholesome or unfortunate experience for him? .....
Give concrete evidence (use back of this sheet if necessary). .....
.....
.....

3. So far as his home reaction indicated, was he interested in it? .....
.....
.....

4. Did it seem to be a satisfying experience for him, or not? .....
.....
.....

5. As the instruments were kept at school, all the practicing and the drill for techniques were done in the classroom. Did he complain at home of the classroom practice periods? .....
.....
.....

6. Did he complain at home of the orchestra rehearsals? .....
.....
.....

7. Did he complain of the strict discipline which it is necessary to have in any orchestra? .....
.....
.....

8. Has the work on the symphony increased or decreased his interest in music in general? .....

9. Has it stimulated a desire for any special instrument? .....
.....
.....

10. Do you consider that he has gained something that will enhance his *enjoyment and appreciation* of music in the future? .....
.....
.....

11. Do you consider this type of experience valuable for *public school* children?
.....

12. Is there anything else which you think I should know about it? I would greatly appreciate a candid and free expression from you, whether it is *for* or *against* the symphony. Write on the back of this sheet.

With grateful thanks for any data which you are able to give me, I am

Sincerely yours,

SATIS N. COLEMAN.

PUPIL QUESTIONNAIRES

JUNIOR HIGH SCHOOL QUESTIONNAIRE

Information to Help Mrs. Coleman in Writing About Her Symphonies

Name ....., boy or girl
Age ....., grade ....., date .....

1. Have you played in Mrs. Coleman's symphonies? (circle the number) 0 1 2.
2. If you have not played, how many have you heard? (circle the number) 0 1 2 3.
3. Had you ever heard a symphony before? .....
4. Had you studied music before? ..... What instrument? .....
5. Have you heard symphonies since hearing or playing in Mrs. Coleman's symphonies? .....
6. Did you compose any tunes for one of Mrs. Coleman's symphonies? .....
.....
7. What instruments did you play in the symphony? (underline them): marimba, horn, trumpet, triangle, Pan-pipes, flageolet, ocarina, drum, cymbals, bells, orchestral bells, psaltery, violin, flute, harmonica, metal bar.
8. Put two lines under the one you like best.
9. *Write an essay*, telling (A) What you got out of the symphony (whether you played in one, or only heard it played). (B) Do you think this kind of school symphony would be a worth-while experience for other school children? Give all the reasons you can think of. (C) Has this experience had any influence on your work-habits or achievement in other work? (D) What would you think of this kind of experience for High School children? (E) Would you like to take part in a High School symphony made of High School children's tunes, and with the regular instruments of the High School orchestra? If so, what instrument would you like to play?

14. As you now look back on it, do you think your symphony experience made you more or less *interested in music in general*, and in *learning to play?* .....
.....
15. Has playing in a symphony, or hearing our school symphonies, *increased or decreased your interest in symphony music?* .....
.....
16. Did you get any *special information about symphonies, either about the instruments or about symphonic form?* .....
.....

17. Do you find it easier to understand and *follow the form of a symphony, when you hear one, than you did before?* .....
.....

QUESTIONNAIRE FOR 4TH AND 5TH GRADES

Name.....Age.....Grade.....

1. Did you like to work on the symphony? .....
2. After you had learned it, how did it make you feel to play the symphony?
.....
3. Would you call your symphony experience a tiresome, indifferent, pleasant, happy, or very joyous one? (Underline the word that best fits you.)
4. Would you like to be in another one some time? .....
5. Would you like to play in a professional orchestra later, if you should get a chance? .....
6. What instrument would you like to learn to play? .....
7. Do you think you will understand and enjoy hearing other symphonies more than ever now? .....
8. Was it too hard for you to keep from talking during our symphony practice?
.....
9. Do you think that your work on the symphony helped you to have more self-control about talking and making other noises? .....
10. Do you think your work on the symphony helped you to learn to be calm and not to get excited? ..... If so, how? .....
.....
11. Did you learn to concentrate and keep your mind on one thing while other things were going on around you? .....
12. What special things can you do that will help you in working with others?
.....
.....
13. Did you enjoy being a member of a large orchestra and doing your part to make the symphony sound beautiful? .....
14. What are the things you liked most about the symphony? .....
.....
.....
.....

15. What are the things you liked least about the symphony? .....
.....
.....
.....

QUESTIONNAIRE FOR 6TH GRADE

Name.....Age.....Grade.....

1. Did you enjoy working on the symphony? .....
2. After you had learned it, did it give you an artistic pleasure to play it? .....
3. Would you like to play in another one some time? .....
4. Would you like to play in a professional orchestra, later? .....
5. If so, what instrument would you like to learn to play? .....
6. Do you think you will enjoy hearing other symphonies more now and understand them better? .....
7. Do you consider that our regulations about talking during symphony practice were too strict, about right, or not strict enough? .....
8. Do you think that your work on the symphony helped your power of self-control in talking and making other disturbances? .....
9. If so, explain how it helped you. .....
.....
10. Did your work on the symphony help you to learn to be calm and have more poise? ..... If so, how? .....
.....
11. Did you make any progress in learning to concentrate and keep your mind on one thing while other things were going on around you? .....
12. What do you consider the main things to do in learning to do good "team work"?
.....
.....
13. Did you like the idea of being a member of such a large organization and doing your part to make the symphony sound beautiful? .....
14. What were the things you liked most about the symphony? .....
.....
15. What were the things you liked least about it? .....
.....
.....
.....
16. Which gave you more pleasure, playing for the fun of it, or playing before an audience? .....
17. Is there anything you would like to say that this questionnaire has not covered? If so, please write fully.

BIBLIOGRAPHY

Aristotle. *Politics*, Book VIII.

Aristotle. *Problems*, Book XIX.

Boas, Franz. *Primitive Art.* Harvard University Press, 1928.

Boas, Franz. *The Central Eskimo.* Sixth Annual Report, Bureau of Ethnology, Washington, D. C., 1894–95.

Bombet, L. A. C. *The Lives of Haydn and Mozart.* Translated by Henri Beyle. London, 1818.

Coleman, S. N. *Creative Music for Children.* G. P. Putnam's Sons, New York, 1922.

Coleman, S. N. *First Steps in Playing and Composing.* The John Day Company, New York, 1930.

Coleman, S. N. *The Drum Book.* The John Day Company, New York, 1931.

Coleman, S. N. *The Marimba Book.* The John Day Company, New York, 1930.

Engel, Carl. *The Music of the Most Ancient Nations.* Reeves, London, 1909.

Frazer, Sir James G. *The Golden Bough.* The Macmillan Company, New York, 1923.

Hawkins, Sir John. *A General History of the Science and Practice of Music*, Vol. I. Novello, London, 1853.

Haydn, Joseph. *Kindersinfonie.* G. Schirmer, New York.

Hensel-Klingemann. *The Mendelssohn Family.* Sampson Low, London, 1881.

Naumann, Emil. *History of Music*, Vol. I. Cassell and Co., London, 1886.

Plato. *The Republic*, Book III.

Pohl, Karl F. *Joseph Haydn*, Vol. II. Nachfolger, Berlin, 1875.

Rowbotham, John F. *History of Music*, Vol. I. Trubner, London, 1885.

Wallaschek, Richard. *Primitive Music.* Longmans, Green & Co., London, 1893.

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